

TOSHIBA

FILE NO. 060-200514GR

SERVICE MANUAL

Projection Television

62CM9UA
62CM9UE
62CM9UR
72CM9UA
72CM9UE
72CM9UR

The above models are classified as green products (*1), as indicated by the underlined serial numbers. This Service Manual describes replacement parts for the green products. When repairing these green products, use the parts described in this manual and lead-free solder (*2).

For (*1) and (*2), see the next page.

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(*1)

GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

(*2)

LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING

This product is manufactured using lead free solder.

DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT !

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product — especially when soldering large components, through-hole pins, and on PCBs — as the level of heat required to melt lead-free solder is high.

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

SAFETY PRECAUTION

WARNING: SERVICE SHOULD NOT BE ATTEMPTED BY ANYONE UNFAMILIAR WITH THE NECESSARY PRECAUTIONS ON THIS RECEIVER. THE FOLLOWING ARE THE NECESSARY PRECAUTIONS TO BE OBSERVED BEFORE SERVICING THIS CHASSIS.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
3. Always advise users to keep children away. There is danger of injury to children from tools, disassembled products, etc.
4. Always disconnect the power plug before starting work whenever power is not required. Failure to disconnect the power plug before starting work can result in electrical shock.
5. Depending on the model, use an insulation transformer or wear gloves when servicing with the power on, and disconnect the power plug to avoid electrical shock when replacing parts. In some cases, alternating current is also impressed in the chassis, so electrical shock is possible if the chassis is contacted with the power on.
6. Always use the replacement parts specified for the particular model when making repairs. The parts used in products have the necessary safety characteristics such as inflammability, voltage resistance, etc.; therefore, use only replacement parts that have these same characteristics. Use only the specified parts when the \triangle mark is included in a circuit diagram or parts list.
7. Parts mounting and routing of the wiring should be the same as that used originally. For safety purposes, insulating materials such as tubing or tape is sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wiring is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the original scheme.
8. After a repair has been completed, reassemble all disassembled parts, and route and reconnect the wiring, in accordance with the original scheme. Do not allow internal wiring to be pinched by cabinets, panels, etc. Any error in reassembly or wiring can result in electrical leakage, flame, etc., and may be hazardous.
9. Never remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous.
10. Touch current check (After completing the work, measure touch current to prevent an electric shock.)
 - Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
 - Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure D.1.
 - The potential at any point (TOUCH CURRENT) expressed as voltage U_1 and U_2 does not exceed the following value:

The part or contact of a TERMINAL is not HAZARDOUS LIVE if:

- a) the open-circuit voltage does not exceed 35 V (peak) a.c. or 60 V d.c., or, if a) is not met,
- b) the measurement of the TOUCH-CURRENT shall be carried out in accordance with IEC 60990, with the measuring network described in annex D of this standard.

The TOUCH CURRENT expressed as voltages U_1 and U_2 , does not exceed the following values:

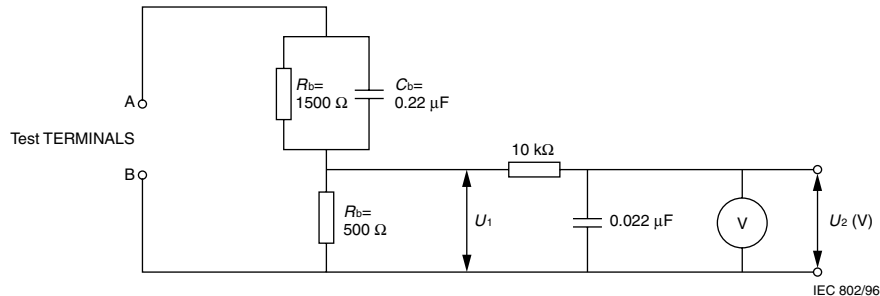
- for a.c.: $U_1 = 35$ V (peak) and $U_2 = 0,35$ V (peak);
- for d.c.: $U_1 = 1,0$ V,

NOTE - The limit values of $U_2 = 0,35$ V (peak) for a.c. and $U_1 = 1,0$ V for d.c. correspond to the values 0,7 mA (peak) a.c. and 2,0 mA d.c.

The limit value $U_1 = 35$ V (peak) for corresponds to the value 70 mA (peak) a.c. for frequencies greater than 100 kHz.

Annex D (normative)

Measuring network for TOUCH CURRENTS



Resistance values in ohms (Ω)

V: Voltmeter or oscilloscope
(r.m.s. or peak reading)

Input resistance: $\geq 1 \text{ M}\Omega$

Input capacitance: $\leq 200 \text{ pF}$

Frequency range: 15 Hz to 1 MHz and d.c. respectively

NOTE – Appropriate measures should be taken to obtain the correct value in case of non-sinusoidal waveforms.

The measuring instrument is calibrated by comparing the frequency factor of U_2 with the solid line in figure F.2 of IEC 60990 at various frequencies. A calibration curve is constructed showing the deviation of U_2 from the ideal curve as a function of frequency.

TOUCH CURRENT = $U_2/500$ (peak value).




Fig. D.1

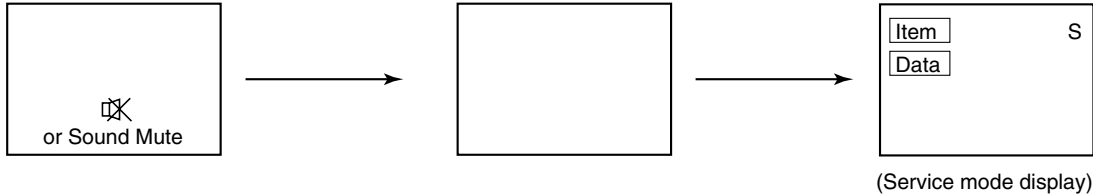
PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

SERVICE MODE

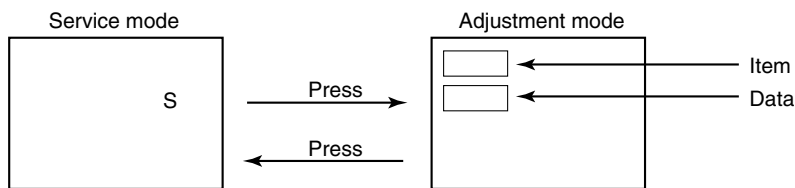
1. ENTERING SERVICE MODE

- 1) Press  button once on Remote Control.
- 2) Press  button again and keep pressing.
- 3) While pressing the  button, press MENU button on TV set.




2. DISPLAYING THE ADJUSTMENT MENU

- 1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

Test signal selection :	↺ button (on Remote)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume  +/- (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory :	CALL + Channel button on TV (▲)
Reset the count of operating protect circuit to "00":	CALL + Channel button on TV (▼)
"RCUT" selection :	1 button
"GCUT" selection :	2 button
"BCUT" selection :	3 button
Self diagnostic display ON/OFF :	9 button
A/D Adjustment :	7 button ; Component Input(1080i/60) ; PC Input (VGA) (Use for this adjustment)
"CNTX" selection :	4 button
"COLC" selection :	5 button
"UVTT" selection :	6 button

CAUTION : Never try to perform initialization unless you have changed the memory IC.

4. SELECTING THE ADJUSTING ITEMS

- 1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-1.
(▼ button for reverse order)

Refer to table-1 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 10)

5. ADJUSTING THE DATA

- 1) Pressing of VOLUME ▲/– button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

- 1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA

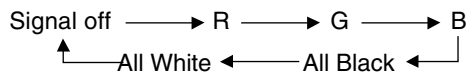
After replacing EEPROM IC, the following initialization is required.


1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of EEPROM IC has been completed.
3. Check the picture carefully. If necessary, adjust any adjustment item above.
Perform "Auto tune" on the owner's manual.

CAUTION: Never attempt to initialize the data unless EEPROM IC has been replaced.

7. TEST SIGNAL SELECTION

- 1) Every pressing of –◀ button on the Remote Control changes the built-in test patterns on screen as described below in SERVICE MODE.



Signals	Picture
<ul style="list-style-type: none">• Red raster• Green raster• Blue raster• All Black• All White	

8. SELF DIAGNOSTIC FUNCTION

- 1) Press "9" button on Remote Control during display of adjustment menu in the service mode.
The diagnosis will begin to check if interface among IC's is executed properly.
- 2) During diagnosis, the following displays are shown.

Self check		
①	Firmware	: CM9_ASIA_1.000
②	Time	: 00000(Lamp:000000)
③	Bus cont	: OK
④	Block	: UV V1 V2 V3 V4 V5 V6 PC
⑤	DLP	: +10 +99
62CM9UA		

⑥

① Firmware :

Version information of microprocessor

In case of file name : CM9_ASIA and Version : 1.000 indicates [CM9_ASIA_1.000].

② Time : Total hour of turn the TV on. (Unit : H)

③ Bus cont : --- "OK" is normal.

NG is abnormal(Red indication), when type name of semiconductor indicates.

④ Block

UV : TV reception mode

V1 : VIDEO 1 input mode (→ 1)

V2 : VIDEO 2 input mode (→ 2)

V3 : COMPONENT VIDEO 1 input mode (→ C1)

V4 : COMPONENT VIDEO 2 input mode (→ C2)

V5 : HDMI 1 input mode (HDMI1)

V6 : HDMI 2 input mode (HDMI2)

PC : PC input mode (PC)

⑤ DLP :

Temperature indication

+10 indicates temperature nearby the Lamp Unit

+99 indicates temperature nearby the Optical Engine

⑥ Model name (7 digit)

9. SETTING HOTEL MODE

Enter to service mode and select Hotel Mode menu by pressing P▲ or P▼.

After selecting Hotel Mode, press \triangleleft + to enter details setting in Hotel Mode.

To select menu, press P▲ or P▼ and press OK to enter the adjustment menu of OPT2.

To move the cursor in the adjustment, press \triangleleft + or \triangleleft -.

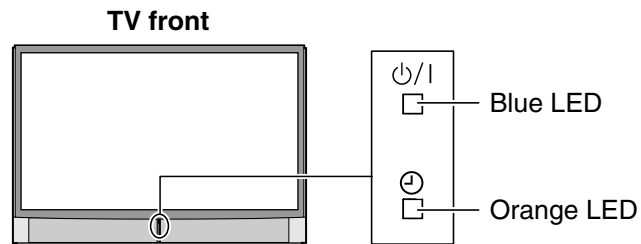
(1) By pressing P▲ or P▼, OPT2 setting will change the value either 1 or 0 on selected items as follows;

OPT2	FUNCTION DESCRIPTION	1	0 (Normal)
D7 (bit7)	POS1 stored program will appear in forced when turn ON the main power,	POS1 in forced	Disable
D6 (bit6)	VIDEO1 stored program will appear in forced when turn ON the main power, (Enable in No.8=0)	VIDEO1 in forced	Disable
D5 (bit5)	FRONT Key	Disable	Enable
D4 (bit4)	All keys except input selector key (Video/TV)	Disable	Enable
D3 (bit3)	User Remote Control operation	Disable (Service mode and Super User mode may possible to setting only)	Enable
D2 (bit2)	Language display except SETUP MENU language (tuning / conver adjustment etc.)	Disable Display the language only	Enable
D1 (bit1)	SETUP MENU	Disable	Enable
D0 (bit0)	HOTEL Mode	On (Enable the setting of No.1 to No.8)	Off (Normal)

10. LED indications

The orange and blue LEDs on the TV (at the bottom center of the TV) indicate the TV's status, as described below.

- Blue ON (solid) and Orange OFF = The TV power cord is plugged in.
- Orange ON (solid) and Blue OFF = The On timer is operating.
- Orange and/or Blue blinking (see table below).



	LED Indication	Condition	Solution
1	Orange blinks continuously at 3-second intervals. Blue blinks continuously at 0.5-second intervals.	The lamp unit door is not seated properly.	Turn OFF the TV and unplug the power cord. Review "LAMP UNIT REPLACEMENT" on pages 14–15 to ensure that the lamp door is installed securely.
2	Orange blinks continuously at 0.5-second intervals; Blue is ON (solid).	The lamp is not working properly.	The TV will automatically try to restart itself eight times (see item #3).
3	Orange and Blue blink continuously at 1-second intervals.	The lamp is not working properly after the eighth automatic restart (see item #2).	Turn the TV OFF and then ON again. If the problem persists, replace the lamp unit (see pages 14–15).
4	Orange is OFF; Blue blinks at 0.2-second intervals 4 times (repeat).	An abnormal temperature increase has occurred.	Turn OFF the TV. Check to make sure all slots and openings in the TV cabinet are not covered, blocked, or dusty. Turn ON the TV again.
5	Orange is OFF; Blue blinks continuously at 0.5-second intervals.	Abnormal operation (including cooling fan stop).	Turn OFF the TV and unplug the power cord. Plug the power cord in again and turn ON the TV.
6	Orange is OFF; Blue blinks continuously at 1-second intervals.	Abnormal operation of BUS line.	Turn OFF the TV and unplug the power cord. Plug the power cord in again and turn ON the TV.
7	Orange is OFF; Blue blinks at 0.2-second intervals 3 times (repeat).	The color wheel has stopped.	Turn OFF the TV and unplug the power cord. Plug the power cord in again and turn ON the TV.

SETTING & ADJUSTING DATA

【 SERVICE MODE 】

ADJUSTING ITEMS AND DATA IN THE SERVICE MODE:

Item	Name of adjustment	Preset	Data	Item	Name of adjustment	Preset	Data	
RCUT	R CUT OFF	00H	←	HPOS	H-POSITION	00H	←	HOTEL MODE
GCUT	G CUT OFF	00H	←	VPOS	V-POSITION	00H	←	
BCUT	B CUT OFF	00H	←	CWDH	COLOR WHEEL DELAY (HIGH)	00H	←	
GDRV	G DRIVE	80H	←	CWDL	COLOR WHEEL DELAY (LOW)	6EH	←	
BDRV	B DRIVE	80H	←	DMDB	DMD BIAS	03H	←	
RDRV	R DRIVE	80H	←	OPT2	TV SET OPTION 2	00H	←	
BRTC	BRIGHTNESS CENTER	02H	←	PLLW0	PLL WAIT TIME	14H	←	
COLC	COLOR CENTER	C7H	←	PLLW1	PLL WAIT TIME	03H	←	
UVTT	BASE BAND TINT	FFH	←	PLLW2	PLL WAIT TIME	0FH	←	
CNTX	CONTRAST MAX	80H	←	PLLW3	PLL WAIT TIME	05H	←	
CNTCG	G CONTRAST CENTER	64H	←	PLLW4	PLL WAIT TIME	14H	←	
CNTCR	R CONTRAST CENTER	64H	←	PLLW5	PLL WAIT TIME	04H	←	
CNTCB	B CONTRAST CENTER	64H	←	VOLX	MAX VOLUME LIMITED	64H	←	

Table-1

Note:

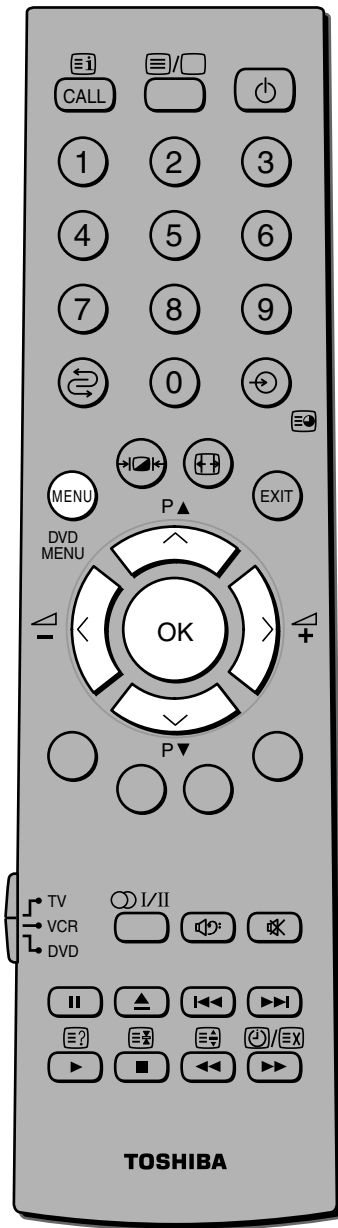
The image system data of RCUT-BDRV is different by each image format.

The PAL value is indicated in the table.

Never adjust H.POS and V.POS except PAL/WIDE mode.

PROGRAMMING CHANNEL MEMORY

System selection, Auto tuning



1 Press the **MENU** button, then press the < or > button to display the SET UP menu.

2 Press the ∨ or ∧ button to select Auto tuning.

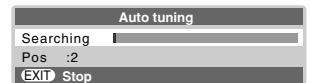
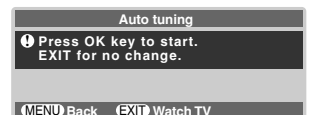
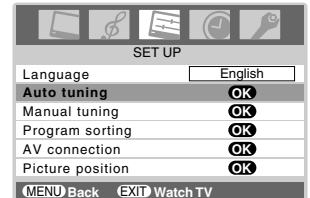
3 Press the **OK** button to display the Auto tuning menu.

4 Press the **OK** button to start the automatic search.
The programming will begin from the current position for all available stations.
The slide bar will move along the line as the search progresses.

If you make a mistake, simply repeat steps 1-4 to start again from the beginning.

5 When the automatic search is complete, the TV will automatically return to the first program position.

6 Press the **P▲** or **P▼** button to select the programmed position.

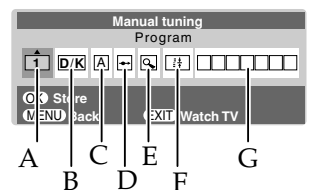
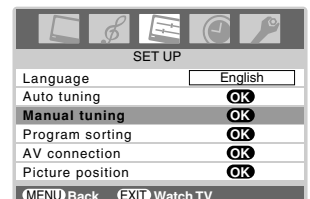


Manual tuning

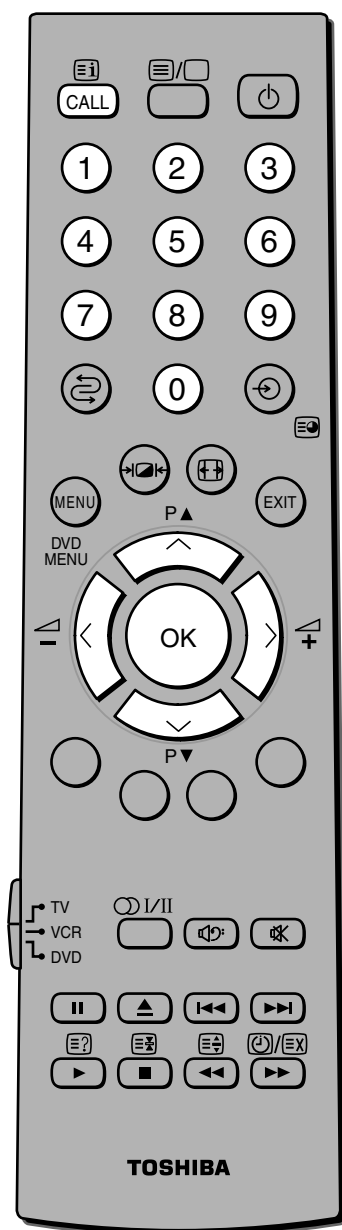
1 Press the **MENU** button, then press the < or > button to display the SET UP menu. Press the ∨ or ∧ button to select Manual tuning.

2 Press the **OK** button to display the Manual tuning menu. Press the ∨ or ∧ button to select the program position you want to arrange.

3 Press the **OK** button to display the breakdown menu. Press the < or > button to select an item, then press the ∨ or ∧ button to select the item as shown on the next page.



Manual tuning (continued)



A. Program position selection

B. Sound system

C. Color system

A : Automatic (factory set), P : PAL, S : SECAM
N4 : NTSC 4.43 (MHz), N3 : NTSC 3.58 (MHz)

If the color of a certain channel is abnormal, the automatic color system selection (A) may have malfunctioned, or sound system selection is wrong. In such a case, select another color and/or sound system.

D. Program position skip selection

Press the \wedge or \vee button to turn the program position skip option on " \curvearrowright " or off " \curvearrowleft ".

The program position will then be skipped when you select channels with the **P \blacktriangle** or **P \blacktriangledown** button.

The " \curvearrowright " mark will appear beside a program position number when you use the **Number** button on the remote control.

E. Channel search operation

Press the \wedge button to search up the band or the \vee button to search down the band.

Press the \vee or \wedge button repeatedly until your desired channel is displayed.

When a station/satellite is found, it will be displayed.
DO NOT PRESS ANY OTHER BUTTONS WHILE THE SET IS TUNING.

F. Auto Fine Tuning

Press the \vee or \wedge button to turn the Auto Fine Tuning option on " ⌘ " or off "0".

The Auto Fine Tuning function automatically corrects slight fluctuations when receiving signals.

Manual Fine Tuning

While the Auto Fine Tuning turn off "0", press the \vee or \wedge button so that the better picture and sound are obtained.

G. Label

Station labels appear under the program position display each time you turn on the TV, select a channel, or press the **CALL** button.

To change or create station labels:

- 1) Press the \vee or \wedge button repeatedly to select a character for the first space, then press the \blacktriangleright button.

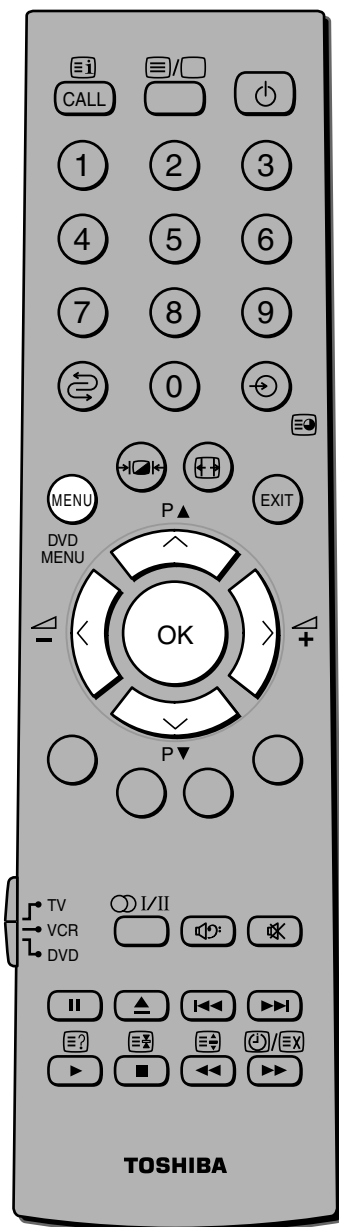
$\boxed{\text{A} \leftrightarrow \text{Z} \leftrightarrow (\leftrightarrow) \leftrightarrow * \leftrightarrow + \leftrightarrow , \leftrightarrow - \leftrightarrow . \leftrightarrow / \leftrightarrow 0 \leftrightarrow 9 \leftrightarrow \text{␣} \leftrightarrow}$

*(blank space)

- 2) Repeat step 1) to enter the rest of the characters. If you would like a blank space in the label name, you must choose a blank space from the list of characters.

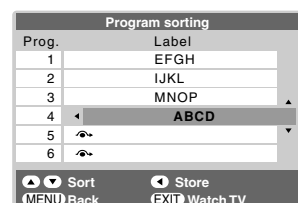
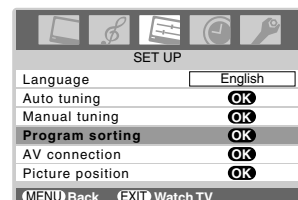
Press the **OK** button to store your settings.

Program sorting



Ex.: To swap channel ABCD (Prog.1) for channel MNOP (Prog.4):

- 1** Press the **MENU** button, then press the < or > button to display the SET UP menu. Press the ^ or v button to select Program sorting.
- 2** Press the **OK** button to display the Program sorting menu.
- 3** Press the ^ or v button to select the channel ABCD, then press the > button.
- 4** Press the v button to select the new position "4", then press the < button.
- 5** Press the ^ button to select the channel MNOP, then press the > button.
- 6** Press the ^ button to select the new position "1", then press the < button.
- 7** Confirm new sorting list.



LAMP UNIT REPLACEMENT

Cautions when replacing LAMP UNIT (E998Z; PJ-D95-DMA)

The light source for this TV is a mercury lamp with internal atmospheric pressure that increases during use. The lamp has a limited service life that varies depending on user settings. If you use the lamp beyond its service life:

- you may notice a reduction in the colors and/or brightness of the picture; and
- the strength of the quartz glass in the lamp will be reduced and the lamp may rupture (often making a loud noise when this happens). If the lamp ruptures, the TV will not operate until the lamp unit is replaced.

Note: The lamp unit is designed so broken lamp glass remains securely inside the lamp unit.

CAUTION: Always handle the lamp unit with care.

The lamp unit in this TV was designed for safe replacement by consumers; however, if the lamp unit is subjected to intentional abuse (such as excessive mechanical abuse or handling by children or pets), the unit may break, exposing edges or pinch points.

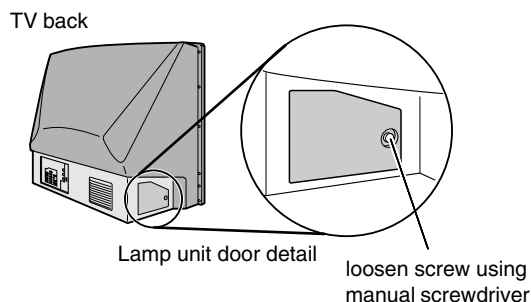
When to replace the lamp unit

You should replace the lamp unit:

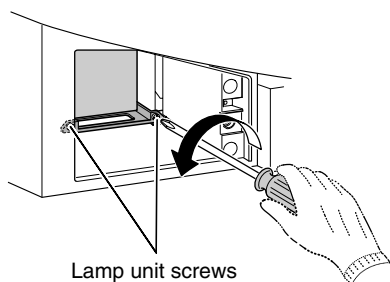
- if the picture darkens and/or colors fade;
- if the lamp does not light; or
- If you hear a loud noise and the picture goes black, which may indicate a lamp rupture (LED indication #2, #3). See LED indications on page 9.

Note: Be sure wear the gloves before replacing the lamp unit.

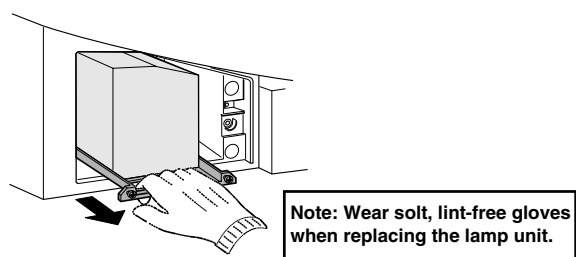
1. Turn off the TV and unplug the power cord.
2. Allow the lamp to cool for at least one (1) hour before replacing it.
3. On the lamp unit door on the side of the TV, loosen the screw using a manual screw driver, and then remove the lamp unit door.



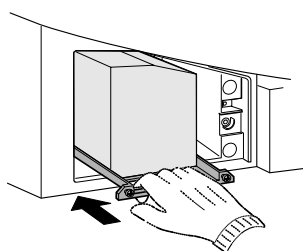
4. Using a manual screwdriver, loosen the two screws on the lamp unit.



5. Grasp the lamp unit handle and gently pull the lamp unit straight out of the TV. Set the old lamp unit aside.



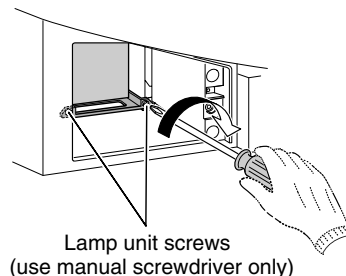
6. Carefully insert the new lamp unit straight into the TV until it is fully seated.



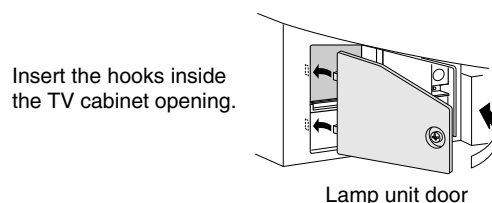
Note :

- ENever subject the lamp unit to excessive shock.
- Never touch the lamp unit glass or otherwise get it dirty.
- Doing so may affect the image quality and reduce the service life of the lamp.

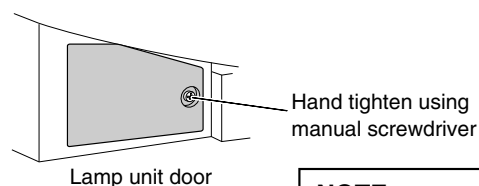
7. Using a manual screwdriver, tighten two lamp unit screws. Note: Hand-tighten only. Do not use an electric screwdriver.



8. Reattach the lamp unit door, making sure to insert the hook on the left side of the lamp unit inside the opening in the TV cabinet.



9. Replace the thumb screw and hand-tighten.



NOTE : Make sure the lamp unit door is installed securely; otherwise, the TV may not turn on.

10. Plug in the power cord and turn on the TV. After the initial warmup period (which may take up to 45 seconds for full picture brightness), the TV should operate normally. If any of the following conditions exist, turn off the TV, unplug the power cord, and repeat steps 1-9 to ensure that the lamp unit and lamp unit door are installed correctly:
 - No picture
 - Dark picture
 - TV will not turn on

LIGHT ENGINE REPLACEMENT

Cautions when replacing LIGHT ENGINE

LIGHT ENGINE UNIT:

A271 : LV-682 TB

(Including with E998Z, SK01 to SK04, SK06,SK08 and SK09.)

- LIGHT ENGINE is a heart of the TV and emits high heat. Make sure to replace it after turning off the TV and wait for sufficient cool down. (More than one hour is recommended.)
- Do not impact during replacement; otherwise, some parts may be damaged.
- Do not touch optical lens. Adhesion of dirt may deteriorate its performance.
- Do not loosen any screw other than those to be removed for adjustment or replacement.
- LIGHT ENGINE emits ultraviolet rays when the TV is ON. Make sure to be careful.

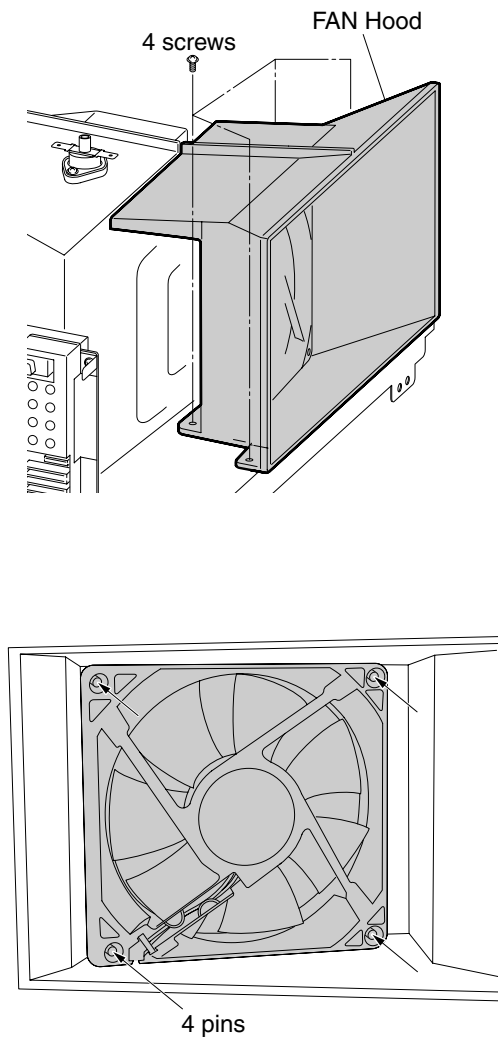
PARTS REPLACEMENT IN LIGHT ENGINE

1. Replacement of Lamp FAN (SK01)

- 1-1. Replace the FAN for cooling Lamp (SK01), remove the 4 screws on the FAN Hood, and remove the 4 pins by pressing toward allows using a screwdriver, and the remove the FAN for cooling Lamp.

NOTE:

Reinstalling the FAN for cooling Lamp, attach the 4 pins by using removed them after replace the FAN.



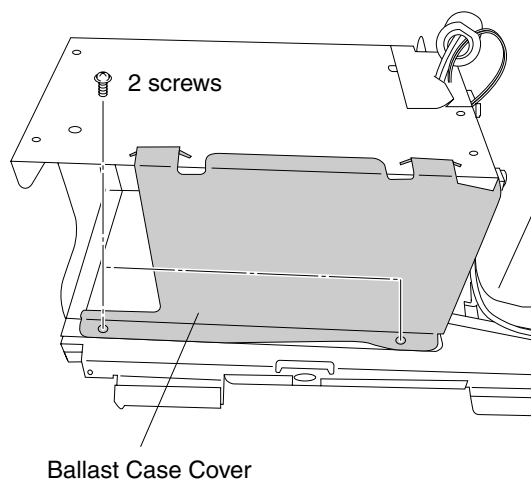
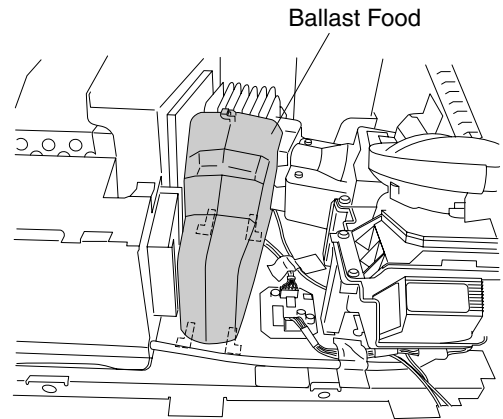
2. Replacement of Ballast FAN (SK03)

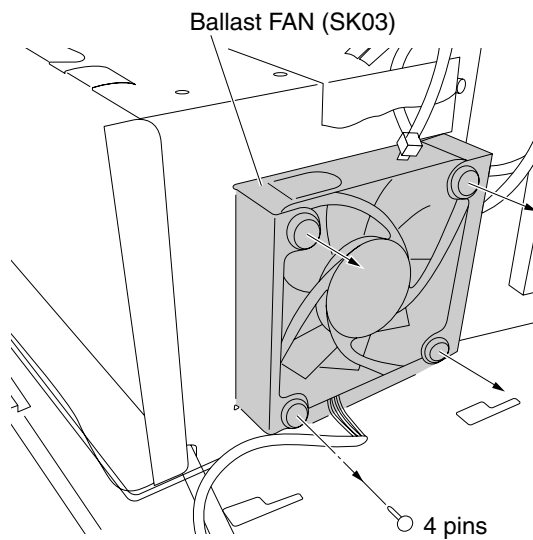
- 2-1. Replace the FAN for cooling Ballast Power Unit (SK03), remove the Ballast Hood, and remove the 2 screws on the Ballast Case Cover.
- 2-2. Remove the 4 pins by pressing toward inside of the FAN using a screwdriver, and then remove the 4 pins toward allows as figure.

Remove the FAN for cooling Ballast Power Unit.

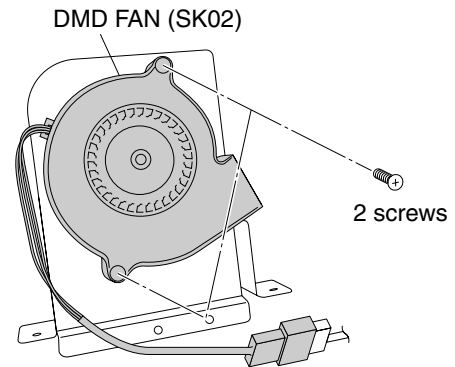
NOTE:

Reinstalling the FAN for cooling Ballast Power Unit, attach the 4 pins by using removed them after replacing the FAN.



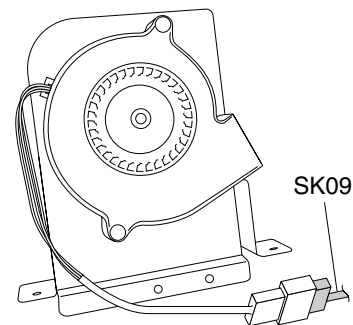
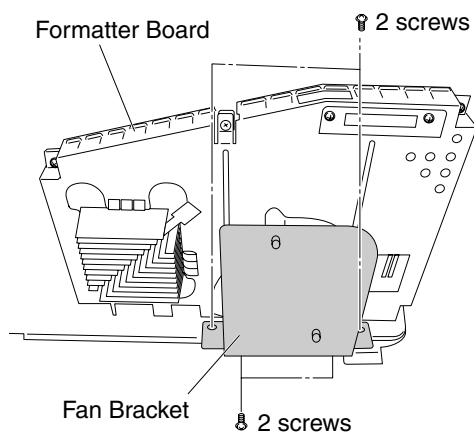


- 3-2. Remove the 2 screws from the bracket, and then remove the FAN for cooling Formatter Board (SK02).
- 3-3. Disconnect and replace the FAN transfer cable between Ballast and Formatter Boards (SK09).



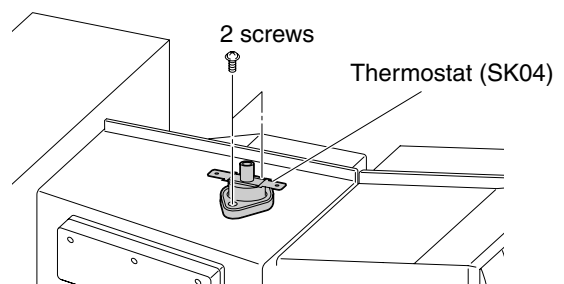
3. Replacement of DMD FAN (SK02) and FAN Transfer Cable (SK09)

- 3-1. Replace the FAN for cooling Formatter Board, detach the Fan Bracket with DMD FAN by removing the 4 screws on the bracket.



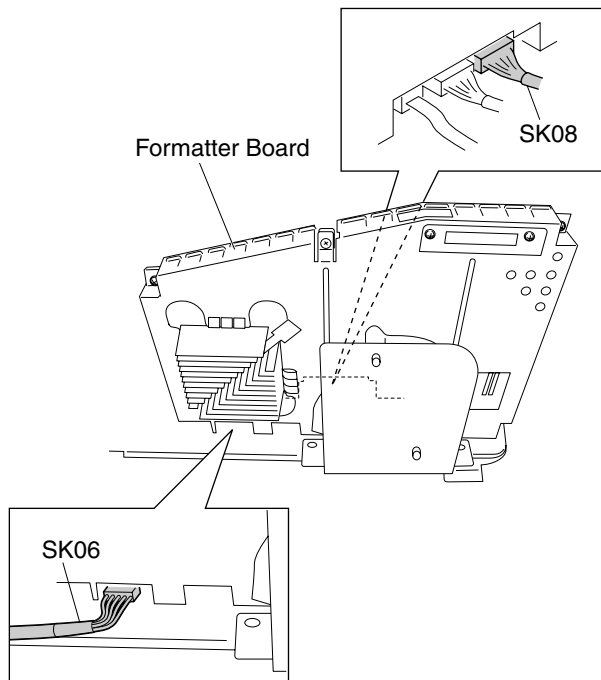
4. Replacement of Thermostat (Lamp Sensor) (SK04)

- 4-1. Replace the Thermostat (Lamp Sensor) (SK04), remove 2 screws on the Thermostat.



5. Replacement of Ballast to Formatter Board Cables (SK06 and SK08)

- 5-1. Disconnect and replace the cable between Ballast and Formatter Boards (SK06).
- 5-2. Disconnect and replace the cable between Smooth Picture and Formatter Boards (SK08).




6. LIGHT ENGINE UNIT

Location No.	Parts No.	Description
△ A271	23405626	OPTICAL ENGINE LV-682 TB 1D 62CM9UA/UE/UR (Incl. E998Z, SK01-SK04, SK06,SK08,SK09)
△	23405627	OPTICAL ENGINE LV-682 TB 1E 72CM9UA/UE/UR (Incl. E998Z, SK01-SK04, SK06,SK08,SK09)
E998Z	23311168	EXCHANGE LAMP, PJ-D95-LMA
SK01	23587525	SERVICE KIT, LAMP FAN
SK02	23587526	SERVICE KIT, DMD FAN
SK03	23587527	SERVICE KIT, BALLAST FAN
SK04	23587528	SERVICE KIT, THERMOSTAT
SK06	23587536	SERVICE KIT, B TO F CABLE
SK08	23587538	SERVICE KIT, S TO F CABLE
SK09	23587539	SERVICE KIT, FAN TRANSFER CABLE

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS ON PAGES 3 AND 4 OF THIS MANUAL.

CAUTION: The international hazard symbols "" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the SAFETY PRECAUTION and PRODUCT SAFETY NOTICE instructions on pages 3 and 4 of this manual. Do not degrade the safety of the receiver through improper servicing.






NOTICE:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with * mark is no longer available after the end of the production.

Model : 62CM9UA/UE/UR / 72CM9UA/UE/UR

Capacitors CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors CF : Carbon Film CC : Carbon Composition MF : Metal Film
 OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor
(All CD and PF capacitors are $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
#1:[62CM9UA]		
#2:[62CM9UE]		
#3:[62CM9UR]		
#4:[72CM9UA]		
#5:[72CM9UE]		
#6:[72CM9UR]		
CAPACITORS		
C101	76109103	CERAMIC CHIP, 50V B 0.01UF K
C102	76665221	ELECTROLYTIC, 10V 220UF M 3A
C103	76109102	CERAMIC CHIP, 50V B 1000PF K
C104	76073084	ELECTROLYTIC, 50V 4.7UF M
C110	76109102	CERAMIC CHIP, 50V B 1000PF K
C111	76109102	CERAMIC CHIP, 50V B 1000PF K
C117	76109103	CERAMIC CHIP, 50V B 0.01UF K
C118	76109103	CERAMIC CHIP, 50V B 0.01UF K
C162	76105101	CERAMIC CHIP, 50V CH 100PF J
C164	76109103	CERAMIC CHIP, 50V B 0.01UF K
C190	76092730	CERAMIC CHIP, 16V B 0.1UF K
C501	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C502	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C503	76794470	ELECTROLYTIC, 16V 47UF M
C504	76109103	CERAMIC CHIP, 50V B 0.01UF K
C505	76794470	ELECTROLYTIC, 16V 47UF M
C506	76109103	CERAMIC CHIP, 50V B 0.01UF K
C507	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C508	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C509	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C514	76763221	ELECTROLYTIC, 16V 220UF M
C516	76105110	CERAMIC CHIP, 50V CH 11PF J
C517	76092785	CERAMIC CHIP, 10V B 0.47UF K
C519	76797479	ELECTROLYTIC, 50V 4.7UF M
C521	76092733	CERAMIC CHIP, 50V B 0.022UF K
C524	76109103	CERAMIC CHIP, 50V B 0.01UF K
C526	76109103	CERAMIC CHIP, 50V B 0.01UF K
C527	76797229	ELECTROLYTIC, 50V 2.2UF M
C529	76100104	CERAMIC CHIP, 25V F 0.1UF Z
C530	76763101	ELECTROLYTIC, 16V 100UF M
C601	76105181	CERAMIC CHIP, 50V CH 180PF J
C602	76105181	CERAMIC CHIP, 50V CH 180PF J
C603	76073087	ELECTROLYTIC, 50V 22UF M 3A
C604	76073087	ELECTROLYTIC, 50V 22UF M 3A
C605	76073087	ELECTROLYTIC, 50V 22UF M 3A
C606	76073087	ELECTROLYTIC, 50V 22UF M 3A

Location No.	Parts No.	Description
C607	76073052	ELECTROLYTIC, 25V 47UF M 3A
C608	76073052	ELECTROLYTIC, 25V 47UF M 3A
C609	76073068	ELECTROLYTIC, 35V 100UF M 3A
C610	76073086	ELECTROLYTIC, 50V 10UF M 3A
C612	76073038	ELECTROLYTIC, 16V 100UF M 3A
C613	76503042	PLASTIC FILM, 63V 0.12UF J
C614	76503042	PLASTIC FILM, 63V 0.12UF J
C615	76073095	ELECTROLYTIC, 50V 2200UF M 3A
C616	76073095	ELECTROLYTIC, 50V 2200UF M 3A
C650	76073086	ELECTROLYTIC, 50V 10UF M 3A
C651	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
C652	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
C653	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
C654	76092795	CERAMIC CHIP, 6.3V B 2.2UF K
C655	76109102	CERAMIC CHIP, 50V B 1000PF K
C656	76109102	CERAMIC CHIP, 50V B 1000PF K
C659	76794101	ELECTROLYTIC, 16V 100UF M
C660	76794101	ELECTROLYTIC, 16V 100UF M
C661	76794102	ELECTROLYTIC, 16V 1000UF M
C662	76092726	CERAMIC CHIP, 10V B 2.2UF K
C680	76073094	ELECTROLYTIC, 50V 1000UF M
C681	76109103	CERAMIC CHIP, 50V B 0.01UF K
C682	76073086	ELECTROLYTIC, 50V 10UF M 3A
 C801	76503002	PLASTIC FILM, AC275V 0.22UF M
 C803	76503001	PLASTIC FILM, AC275V 0.1UF M
C804	76092281	CERAMIC DISC, AC250V E 4700PF
C805	76092281	CERAMIC DISC, AC250V E 4700PF
 C808	76092565	CERAMIC DISC, AC250V B 470PF K
 C809	76092565	CERAMIC DISC, AC250V B 470PF K
C810	76086934	ELECTROLYTIC, 450V 560UF M 35F
C811	76820103	PLASTIC FILM, 630V 0.01UF J
C815	76285104	CERAMIC CHIP, 50V B 0.1UF K
C816	76669470	ELECTROLYTIC, 50V 47UF M
C817	76092179	CERAMIC CHIP, 25V B 0.22UF K
C818	76285104	CERAMIC CHIP, 50V B 0.1UF K
C819	76214102	CERAMIC DISC, 500V B 1000PF K
C820	76092463	CERAMIC CHIP, 16V B 0.22UF K
C821	76092343	CERAMIC DISC, 2KV 680PF K
C822	76092344	CERAMIC DISC, 2KV 820PF K
C823	76092337	CERAMIC DISC, 2KV 220PF K
C824	76109472	CERAMIC CHIP, 50V B 4700PF K
 C825	76503117	PLASTIC FILM CQ92 T 800V 33000PF J
C826	76092338	CERAMIC DISC, 2KV R 270PF K
C827	76503053	PLASTIC FILM, 63V 1UF J

Location No.	Parts No.	Description
C828	76214103	CERAMIC DISC, 500V B 0.01UF K
C829	76678229	ELECTROLYTIC, 200V 2.2UF M
C840	76092730	CERAMIC CHIP, 16V B 0.1UF K
△C847	76503117	PLASTIC FILM CQ92 T 800V 33000PF J
C848	76503148	PLASTIC FILM, 1250VH 5100PF H
C849	76820103	PLASTIC FILM, 630V 0.01UF J
C855	76073157	ELECTROLYTIC, 16V 1500UF M 3A
C856	76073157	ELECTROLYTIC, 16V 1500UF M 3A
C857	76073172	ELECTROLYTIC, 25V 1000UF M 3A
C858	76073172	ELECTROLYTIC, 25V 1000UF M 3A
C860	76073205	ELECTROLYTIC CE04P 50V 470UF M 3A
C870	76092178	CERAMIC CHIP, 25V B 0.1UF K
C898	76092178	CERAMIC CHIP, 25V B 0.1UF K
△C899	76092563	CERAMIC DISC, AC250V B 220PF K
C8905	76073039	ELECTROLYTIC, 16V 220UF M 3A
C8910	76092738	CERAMIC CHIP, 25V B 0.47UF K
C8911	76073151	ELECTROLYTIC, 16V 120UF M 3A
C8920	76073053	ELECTROLYTIC, 25V 100UF M 3A
C8921	76092738	CERAMIC CHIP, 25V B 0.47UF K
C8922	76667470	ELECTROLYTIC, 25V 47UF M
C8923	76073040	ELECTROLYTIC, 16V 330UF M 3
C8924	76092730	CERAMIC CHIP, 16V B 0.1UF K
C8931	76092738	CERAMIC CHIP, 25V B 0.47UF K
C8932	76667470	ELECTROLYTIC, 25V 47UF M
C8933	76073040	ELECTROLYTIC, 16V 330UF M 3
C8934	76092730	CERAMIC CHIP, 16V B 0.1UF K
C8960	76092616	CERAMIC CHIP, 16V B 0.33UF K
C8961	76092730	CERAMIC CHIP, 16V B 0.1UF K
CB01	76794470	ELECTROLYTIC, 16V 47UF M
CC31	76109102	CERAMIC CHIP, 50V B 1000PF K
CC47	76109332	CERAMIC CHIP, 50V B 3300PF K
CC48	76109332	CERAMIC CHIP, 50V B 3300PF K
CC51	76109103	CERAMIC CHIP, 50V B 0.01UF K
CC52	76109103	CERAMIC CHIP, 50V B 0.01UF K
CC601	76109102	CERAMIC CHIP, 50V B 1000PF K
CC602	76109102	CERAMIC CHIP, 50V B 1000PF K
CC605	76109102	CERAMIC CHIP, 50V B 1000PF K
CC606	76109102	CERAMIC CHIP, 50V B 1000PF K
CC607	76109102	CERAMIC CHIP, 50V B 1000PF K
CC608	76109102	CERAMIC CHIP, 50V B 1000PF K
CC609	76109102	CERAMIC CHIP, 50V B 1000PF K
CC610	76109102	CERAMIC CHIP, 50V B 1000PF K
CC611	76109102	CERAMIC CHIP, 50V B 1000PF K
CC614	76109102	CERAMIC CHIP, 50V B 1000PF K
CC615	76109102	CERAMIC CHIP, 50V B 1000PF K
CC618	76109102	CERAMIC CHIP, 50V B 1000PF K
CC619	76109102	CERAMIC CHIP, 50V B 1000PF K
CC620	76109102	CERAMIC CHIP, 50V B 1000PF K
CC621	76109102	CERAMIC CHIP, 50V B 1000PF K
CC622	76109102	CERAMIC CHIP, 50V B 1000PF K
CC623	76109102	CERAMIC CHIP, 50V B 1000PF K
△CE02	76503001	PLASTIC FILM, AC275V 0.1UF M
CE04	76092281	CERAMIC DISC, AC250V E 4700PF
CE04A	23960136	ADHESIVE, SILICONE, TSE3843-W
CE05	76092281	CERAMIC DISC, AC250V E 4700PF
CE08	76503253	PLASTIC FILM, 1250VH 0.01UF H
CE10	76125009	CHEMICON 450V 47UF M
△CE13	76092565	CERAMIC DISC, AC250V B 470PF K
CE20	76667470	ELECTROLYTIC, 25V 47UF M
CE21	76092738	CERAMIC CHIP, 25V B 0.47UF K
CE22	76073151	ELECTROLYTIC, 16V 120UF M 3A
CE51	76073137	ELECTROLYTIC CE04P 10V 100UF M 3A
CE52	76092616	CERAMIC CHIP, 16V B 0.33UF K
CE53	76073137	ELECTROLYTIC CE04P 10V 100UF M 3A
CE54	76666470	ELECTORLYTIC, 16V 47UF M
CE55	76092616	CERAMIC CHIP, 16V B 0.33UF K
CE56	76666470	ELECTORLYTIC, 16V 47UF M
CE61	76092339	CERAMIC DISC, 2KV 330PF K
CE62	76503049	PLASTIC FILM, 63V 0.47UF J

Location No.	Parts No.	Description
CE63	76669339	ELECTROLYTIC, 50V 3.3UF M
CE64	76503041	PLASTIC FILM , 63V 0.1UF J
CE65	76214221	CERAMIC DISC, 500V B 220PF K
CE68	76073180	ELECTROLYTIC CE04P 35V 33UF M 3A
CE72	76591332	PLASTIC FILM, 50V 3300PF J
CE81	76214331	CERAMIC DISC, 500V B 330PF K
CE82	76214331	CERAMIC DISC, 500V B 330PF K
CE83	76073158	ELECTROLYTIC, 16V 2200UF M 3A
CE85	76073174	ELECTROLYTIC, 25V 1500UF M 3A
CE86	76073049	ELECTROLYTIC, 25V 10UF M 3A
CE87	76073049	ELECTROLYTIC, 25V 10UF M 3A
CE88	24640893	ELECTROLYTIC, 100V 47UF M
CE89	76092178	CERAMIC CHIP, 25V B 0.1UF K
CE91	76214102	CERAMIC DISC, 500V B 1000PF K
CE92	76109103	CERAMIC CHIP, 50V B 0.01UF K
CE94	76109103	CERAMIC CHIP, 50V B 0.01UF K
CF08	76092738	CERAMIC CHIP, 25V B 0.47UF K
CF09	76073154	ELECTROLYTIC CE04P 16V 680UF M 3A
CF10	76073154	ELECTROLYTIC CE04P 16V 680UF M 3A
CF11	76092730	CERAMIC CHIP, 16V B 0.1UF K
CF12	76073154	ELECTROLYTIC CE04P 16V 680UF M 3A
CF13	76105471	CERAMIC CHIP, 50V CH 470PF J
CF14	76092731	CERAMIC CHIP, 16V B 1UF K
CF15	76109332	CERAMIC CHIP, 50V B 3300PF K
CF16	76109472	CERAMIC CHIP, 50V B 4700PF K
CF17	76815473	CERAMIC CHIP, 50V B 0.047UF K
CF18	76092628	CERAMIC CHIP, 6.3V B 10UF K
CF19	76073126	ELECTROLYTIC CE04P 6.3V 330UF M 3A
CF20	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF21	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF22	76073126	ELECTROLYTIC CE04P 6.3V 330UF M 3A
CF23	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF24	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF25	76092628	CERAMIC CHIP, 6.3V B 10UF K
CF26	76109103	CERAMIC CHIP, 50V B 0.01UF K
CF27	76109102	CERAMIC CHIP, 50V B 1000PF K
CF28	76092628	CERAMIC CHIP, 6.3V B 10UF K
CF29	76092628	CERAMIC CHIP, 6.3V B 10UF K
CF30	76073153	ELECTROLYTIC, 16V 470UF M 3A
CF31	76092731	CERAMIC CHIP, 16V B 1UF K
CF32	76073126	ELECTROLYTIC CE04P 6.3V 330UF M 3A
CF33	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF34	76092730	CERAMIC CHIP, 16V B 0.1UF K
CF35	76092731	CERAMIC CHIP, 16V B 1UF K
CF36	76092789	CERAMIC CHIP, 6.3V B 1UF K
CF37	76073126	ELECTROLYTIC CE04P 6.3V 330UF M 3A
CF38	76073126	ELECTROLYTIC CE04P 6.3V 330UF M 3A
CS01	76092731	CERAMIC CHIP, 16V B 1UF K
CS02	76092515	CERAMIC CHIP, 16V F 4.7UF Z
CS03	76092726	CERAMIC CHIP, 10V B 2.2UF K
CS04	76092726	CERAMIC CHIP, 10V B 2.2UF K
CS05	76092726	CERAMIC CHIP, 10V B 2.2UF K
CS06	76092726	CERAMIC CHIP, 10V B 2.2UF K
CS08	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS09	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS10	76092628	CERAMIC CHIP, 6.3V B 10UF K
CS11	76092628	CERAMIC CHIP, 6.3V B 10UF K
CS12	76092441	CERAMIC CHIP, 16V F 1UF Z
CS15	76092628	CERAMIC CHIP, 6.3V B 10UF K
CS16	76092628	CERAMIC CHIP, 6.3V B 10UF K
CS26	76794100	ELECTROLYTIC, 16V 10UF M
CS39	76092441	CERAMIC CHIP, 16V F 1UF Z
CS40	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS41	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS42	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS43	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS44	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS45	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS46	76092611	CERAMIC CHIP, 6.3V B 2.2UF K

Location No.	Parts No.	Description
CS47	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS48	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS49	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS52	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS53	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS54	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS55	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS56	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS57	76794470	ELECTROLYTIC, 16V 47UF M
CS58	76109103	CERAMIC CHIP, 50V B 0.01UF K
CS62	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS64	76794220	ELECTROLYTIC, 16V 22UF M
CS85	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CS86	76092611	CERAMIC CHIP, 6.3V B 2.2UF K
CT01	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT04	76105820	CERAMIC CHIP, 50V CH 82PF J
CT05	76092731	CERAMIC CHIP, 16V B 1UF K
CT06	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT07	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT10	76105151	CERAMIC CHIP, 50V CH 150PF J
CT11	76092731	CERAMIC CHIP, 16V B 1UF K
CT12	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT13	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT16	76105151	CERAMIC CHIP, 50V CH 150PF J
CT17	76092731	CERAMIC CHIP, 16V B 1UF K
CT18	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT19	76092790	CERAMIC CHIP CK732B 6.3V 10UF K
CT20	76092789	CERAMIC CHIP, 6.3V B 1UF K
CV01	76794471	ELECTROLYTIC, 16V 470UF M
CV02	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV03	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV04	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV09	76092731	CERAMIC CHIP, 16V B 1UF K
CV10	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV12	76092731	CERAMIC CHIP, 16V B 1UF K
CV16	76092731	CERAMIC CHIP, 16V B 1UF K
CV17	76092731	CERAMIC CHIP, 16V B 1UF K
CV18	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV19	76092731	CERAMIC CHIP, 16V B 1UF K
CV21	76092731	CERAMIC CHIP, 16V B 1UF K
CV22	76092731	CERAMIC CHIP, 16V B 1UF K
CV23	76092731	CERAMIC CHIP, 16V B 1UF K
CV24	76092731	CERAMIC CHIP, 16V B 1UF K
CV25	76092731	CERAMIC CHIP, 16V B 1UF K
CV26	76092731	CERAMIC CHIP, 16V B 1UF K
CV30	76092731	CERAMIC CHIP, 16V B 1UF K
CV33	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV40	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV41	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV42	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV50	76794101	ELECTROLYTIC, 16V 100UF M
CV53	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV59	76762471	ELECTROLYTIC, 10V 470UF M
CV62	76100104	CERAMIC CHIP, 25V F 0.1UF Z
CV63	76794471	ELECTROLYTIC, 16V 470UF M
CV72	76794220	ELECTROLYTIC, 16V 22UF M
CV80	76762471	ELECTROLYTIC, 10V 470UF M
CV87	76109103	CERAMIC CHIP, 50V B 0.01UF K
CV91	76109103	CERAMIC CHIP, 50V B 0.01UF K
CY11	76105680	CERAMIC CHIP, 50V CH 68PF J
RESISTORS		
R101	76011101	CHIP, 1/20W 100 OHM J
R102	76011101	CHIP, 1/20W 100 OHM J
R103	76011101	CHIP, 1/20W 100 OHM J
R104	76011103	CHIP, 1/20W 10K OHM J
R105	76011273	CHIP, 1/20W 27K OHM J
R107	76000445	CHIP JUMPER, 1608TYPE
R108	76000445	CHIP JUMPER, 1608TYPE

Location No.	Parts No.	Description
R114	76000445	CHIP JUMPER, 1608TYPE
R167	76011101	CHIP, 1/20W 100 OHM J
R169	76000445	CHIP JUMPER, 1608TYPE
R170	76011682	CHIP, 1/20W 6.8K OHM J
R229	76872750	CHIP, 1/16W 75 OHM J
R501	76011682	CHIP, 1/20W 6.8K OHM J
R502	76011272	CHIP, 1/20W 2.7K OHM J
R504	76011101	CHIP, 1/20W 100 OHM J
R505	76011101	CHIP, 1/20W 100 OHM J
R506	76011273	CHIP, 1/20W 27K OHM J
R507	76011392	CHIP, 1/20W 3.9K OHM J
R508	76011682	CHIP, 1/20W 6.8K OHM J
R512	76011101	CHIP, 1/20W 100 OHM J
R514	76011102	CHIP, 1/20W 1K OHM J
R601	76011223	CHIP, 1/20W 22K OHM J
R602	76011223	CHIP, 1/20W 22K OHM J
R603	76011103	CHIP, 1/20W 10K OHM J
R604	76011103	CHIP, 1/20W 10K OHM J
R607	76011103	CHIP, 1/20W 10K OHM J
R608	76011223	CHIP, 1/20W 22K OHM J
R609	76871229	CHIP, 1/8W 2.2 OHM J
R610	76871229	CHIP, 1/8W 2.2 OHM J
R611	76011223	CHIP, 1/20W 22K OHM J
R640	76011104	CHIP, 1/20W 100K OHM J
R641	76011224	CHIP, 1/20W 220K OHM J
R642	76011222	CHIP, 1/20W 2.2K OHM J
R643	76011103	CHIP, 1/20W 10K OHM J
R646	76011472	CHIP, 1/20W 4.7K OHM J
R647	76011473	CHIP, 1/20W 47K OHM J
R648	76011224	CHIP, 1/20W 220K OHM J
R651	76011473	CHIP, 1/20W 47K OHM J
R652	76011473	CHIP, 1/20W 47K OHM J
R653	76011122	CHIP, 1/20W 1.2K OHM J
R654	76011122	CHIP, 1/20W 1.2K OHM J
R655	76011223	CHIP, 1/20W 22K OHM J
R656	76011223	CHIP, 1/20W 22K OHM J
R659	76011103	CHIP, 1/20W 10K OHM J
R660	76011103	CHIP, 1/20W 10K OHM J
R661	76011472	CHIP, 1/20W 4.7K OHM J
R662	76011104	CHIP, 1/20W 100K OHM J
R663	76553470	OXIDE METAL FILM, 1W 47 OHM J
R665	76011103	CHIP, 1/20W 10K OHM J
R666	76011103	CHIP, 1/20W 10K OHM J
R667	76011104	CHIP, 1/20W 100K OHM J
R683	76011223	CHIP, 1/20W 22K OHM J
R684	76011223	CHIP, 1/20W 22K OHM J
R685	76011472	CHIP, 1/20W 4.7K OHM J
R686	76011473	CHIP, 1/20W 47K OHM J
R697	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
R698	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
△ R801	76009954	METAL FILN, 1/2W 2.2M OHM J
R803	76011333	CHIP, 1/20W 33K OHM J
R805	76120001	CEMENT RES 141C 2.1W 1R8 K
R806	76120003	CERAMIC COVERED G 5W 4.7 J
R807	76011223	CHIP, 1/20W 22K OHM J
R808	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
R809	76321689	OXIDE METAL FILM, 1/2W 6.8 OHM J
R810	76382150	OXIDE METAL FILM, 1W 15 OHM J
R811	76552820	OXIDE METAL FILM, 1/2W 82 OHM J
R812	76552390	OXIDE METAL FILM, 1/2W 39 OHM J
R813	76366150	CARBON FILM, 1/6W 15 OHM J
R814	76871473	CHIP, 1/8W 47K OHM J
R815	76552100	OXIDE METAL FILM, 1/2W 10 OHM J
R816	76011102	CHIP, 1/20W 1K OHM J
R817	76871473	CHIP, 1/8W 47K OHM J
R818	76871473	CHIP, 1/8W 47K OHM J
R819	76871473	CHIP, 1/8W 47K OHM J
R820	76871473	CHIP, 1/8W 47K OHM J
R821	76871105	CHIP, 1/8W 1M OHM J

Location No.	Parts No.	Description
R822	76871105	CHIP, 1/8W 1M OHM J
R823	76871105	CHIP, 1/8W 1M OHM J
R824	76871105	CHIP, 1/8W 1M OHM J
R825	76011104	CHIP, 1/20W 100K OHM J
R826	76011473	CHIP, 1/20W 47K OHM J
R827	76383473	OXIDE METAL FILM, 2W 47K OHM J
R828	76011104	CHIP, 1/20W 100K OHM J
R829	76366822	CARBON FILM, 1/6W 8.2K OHM J
R830	76011822	CHIP, 1/20W 8.2K OHM J
R840	76552470	OXIDE METAL FILM, 1/2W 47 OHM J
R841	76011103	CHIP, 1/20W 10K OHM J
R843	76011333	CHIP, 1/20W 33K OHM J
R844	76011103	CHIP, 1/20W 10K OHM J
R845	76011332	CHIP, 1/20W 3.3K OHM J
R846	76011103	CHIP, 1/20W 10K OHM J
R847	76011153	CHIP, 1/20W 15K OHM J
R848	76011332	CHIP, 1/20W 3.3K OHM J
R849	76011103	CHIP, 1/20W 10K OHM J
R850	76011472	CHIP, 1/20W 4.7K OHM J
R851	76011333	CHIP, 1/20W 33K OHM J
R852	76011102	CHIP, 1/20W 1K OHM J
R871	76998332	CHIP, 1/16W 3.3K OHM
R872	76998103	CHIP, 1/16W 10K OHM
R873	76011100	CHIP, 1/20W 10 OHM J
R874	76011102	CHIP, 1/20W 1K OHM J
R875	76011471	CHIP, 1/20W 470 OHM J
R876	76011102	CHIP, 1/20W 1K OHM J
R877	76011471	CHIP, 1/20W 470 OHM J
R880	76552102	OXIDE METAL FILM, 1/2W 1K OHM J
⚠ R899	76005014	METAL FILM, 1W 8.2M OHM J
R4100	76011102	CHIP, 1/20W 1K OHM J
R4101	76011681	CHIP, 1/20W 680 OHM J
R4102	76011471	CHIP, 1/20W 470 OHM J
R4103	76011681	CHIP, 1/20W 680 OHM J
R4104	76011102	CHIP, 1/20W 1K OHM J
R4105	76011102	CHIP, 1/20W 1K OHM J
R4106	76011681	CHIP, 1/20W 680 OHM J
R4107	76011471	CHIP, 1/20W 470 OHM J
R4108	76011681	CHIP, 1/20W 680 OHM J
R4109	76011102	CHIP, 1/20W 1K OHM J
R4120	76000445	CHIP JUMPER, 1608TYPE
R4122	76000445	CHIP JUMPER, 1608TYPE
R8910	76011123	CHIP, 1/20W 12K OHM J
R8911	76011391	CHIP, 1/20W 390 OHM J
R8912	76011102	CHIP, 1/20W 1K OHM J
R8921	76011123	CHIP, 1/20W 12K OHM J
R8922	76011182	CHIP, 1/20W 1.8K OHM J
R8923	76366472	CARBON FILM, 1/6W 4.7K OHM J
R8924	76011103	CHIP, 1/20W 10K OHM J
R8931	76011123	CHIP, 1/20W 12K OHM J
R8932	76011182	CHIP, 1/20W 1.8K OHM J
R8933	76011472	CHIP, 1/20W 4.7K OHM J
R8934	76011103	CHIP, 1/20W 10K OHM J
R8950	76011821	CHIP, 1/20W 820 OHM J
R8951	76011473	CHIP, 1/20W 47K OHM J
R8952	76011102	CHIP, 1/20W 1K OHM J
R8953	76011333	CHIP, 1/20W 33K OHM J
R8954	76011333	CHIP, 1/20W 33K OHM J
R8955	76011472	CHIP, 1/20W 4.7K OHM J
R8956	76366681	CARBON FILM, 1/6W 680 OHM J
R8960	76011334	CHIP, 1/20W 330K OHM J
R8961	76011223	CHIP, 1/20W 22K OHM J
R8962	76011223	CHIP, 1/20W 22K OHM J
R8963	76366102	CARBON FILM, 1/6W 1K OHM J
R8964	76011103	CHIP, 1/20W 10K OHM J
RA71	76011103	CHIP, 1/20W 10K OHM J
RA72	76011223	CHIP, 1/20W 22K OHM J
RA73	76011683	CHIP, 1/20W 68K OHM J
RA75	76011103	CHIP, 1/20W 10K OHM J

Location No.	Parts No.	Description
RA76	76011223	CHIP, 1/20W 22K OHM J
RB12	76366471	CARBON FILM, 1/6W 470 OHM J
RB15	76366470	CARBON FILM, 1/6W 47 OHM J
RB81	76011122	CHIP, 1/20W 1.2K OHM J
RB82	76011152	CHIP, 1/20W 1.5K OHM J
RB83	76011102	CHIP, 1/20W 1K OHM J
RB84	76011473	CHIP, 1/20W 47K OHM J
RB92	76011473	CHIP, 1/20W 47K OHM J
RB93	76011102	CHIP, 1/20W 1K OHM J
RC50	76011681	CHIP, 1/20W 680 OHM J
RC51	76011681	CHIP, 1/20W 680 OHM J
RC601	76011681	CHIP, 1/20W 680 OHM J
RC602	76011681	CHIP, 1/20W 680 OHM J
RC603	76011223	CHIP, 1/20W 22K OHM J
RC604	76011223	CHIP, 1/20W 22K OHM J
RC605	76011681	CHIP, 1/20W 680 OHM J
RC606	76011681	CHIP, 1/20W 680 OHM J
RC607	76011223	CHIP, 1/20W 22K OHM J
RC608	76011223	CHIP, 1/20W 22K OHM J
RC609	76011681	CHIP, 1/20W 680 OHM J
RC610	76011681	CHIP, 1/20W 680 OHM J
RC611	76011223	CHIP, 1/20W 22K OHM J
RC612	76011223	CHIP, 1/20W 22K OHM J
RC613	76011223	CHIP, 1/20W 22K OHM J
RC614	76011223	CHIP, 1/20W 22K OHM J
RC615	76011681	CHIP, 1/20W 680 OHM J
RC616	76011681	CHIP, 1/20W 680 OHM J
RC617	76011223	CHIP, 1/20W 22K OHM J
RC618	76011223	CHIP, 1/20W 22K OHM J
RC619	76011681	CHIP, 1/20W 680 OHM J
RC620	76011681	CHIP, 1/20W 680 OHM J
RC621	76011681	CHIP, 1/20W 680 OHM J
RC622	76011681	CHIP, 1/20W 680 OHM J
RC623	76011223	CHIP, 1/20W 22K OHM J
RC624	76011223	CHIP, 1/20W 22K OHM J
RE05	76510479	CERAMIC COVERED, 5W 4.7 OHM J
RE08	76554683	OXIDE RES 2W 68K J
RE18	76011103	CHIP, 1/20W 10K OHM J
RE19	76011103	CHIP, 1/20W 10K OHM J
RE20	76011333	CHIP, 1/20W 33K OHM J
RE21	76011103	CHIP, 1/20W 10K OHM J
RE22	76011103	CHIP, 1/20W 10K OHM J
RE23	76011473	CHIP, 1/20W 47K OHM J
RE24	76011103	CHIP, 1/20W 10K OHM J
RE25	76998153	CHIP, 1/16W 15K OHM
RE26	76998823	CHIP, 1/16W 82K OHM
RE27	76998123	CHIP, 1/16W 12K OHM
RE31	76998273	CHIP, 1/16W 27K OHM
RE32	76998823	CHIP, 1/16W 82K OHM
RE37	76998333	CHIP, 1/16W 33K OHM
RE38	76998104	CHIP, 1/16W 100K OHM D
RE39	76998102	CHIP, 1/16W 1K OHM
RE42	76011104	CHIP, 1/20W 100K OHM J
RE45	76011473	CHIP, 1/20W 47K OHM J
RE50	76011333	CHIP, 1/20W 33K OHM J
RE53	76011473	CHIP, 1/20W 47K OHM J
RE54	76011103	CHIP, 1/20W 10K OHM J
RE60	76382683	OXIDE METAL FILM, 1W 68K OHM J
RE61	76382683	OXIDE METAL FILM, 1W 68K OHM J @U802
	76011103	CHIP, 1/20W 10K OHM J @U102
RE62	76988028	METAL FILM, 1W 0.56 OHM J
RE64	76381221	OXIDE METAL FILM, 1/2W 220 OHM J
RE65	76366102	CARBON FILM, 1/6W 1K OHM J @U802
	76011103	CHIP, 1/20W 10K OHM J @U102
RE66	76366102	CARBON FILM, 1/6W 1K OHM J
RE71	76310829	OXIDE METAL FILM, 1/2W 8.2 OHM J
RE72	76552152	OXIDE METAL FILM, 1/2W 1.5K OHM J
RE81	76998821	CHIP, 1/16W 820 OHM
RE82	76998103	CHIP, 1/16W 10K OHM

Location No.	Parts No.	Description
RE83	76998682	CHIP, 1/16W 6.8K OHM D
RE84	76011221	CHIP, 1/20W 220 OHM J
RE85	76011222	CHIP, 1/20W 2.2K OHM J
RE86	76011102	CHIP, 1/20W 1K OHM J
RE88	76011221	CHIP, 1/20W 220 OHM J
RE92	76011103	CHIP, 1/20W 10K OHM J
RE93	76011103	CHIP, 1/20W 10K OHM J
RE94	76011103	CHIP, 1/20W 10K OHM J
RE95	76382122	OXIDE METAL FILM, 1W 1.2K OHM J
RE96	76011104	CHIP, 1/20W 100K OHM J
RE97	76011153	CHIP, 1/20W 15K OHM J
RE98	76011103	CHIP, 1/20W 10K OHM J
RF07	76011122	CHIP, 1/20W 1.2K OHM J
RF08	76011153	CHIP, 1/20W 15K OHM J
RF09	76011103	CHIP, 1/20W 10K OHM J
RF10	76998123	CHIP, 1/16W 12K OHM
RF11	76998104	CHIP, 1/16W 100K OHM D
RF12	76998473	CHIP, 1/16W 47K OHM
RF13	76011152	CHIP, 1/20W 1.5K OHM J
RF14	76011474	CHIP, 1/20W 470K OHM J
RF15	76011682	CHIP, 1/20W 6.8K OHM J
RF18	76998103	CHIP, 1/16W 10K OHM
RF19	76998682	CHIP, 1/16W 6.8K OHM D
RF20	76998682	CHIP, 1/16W 6.8K OHM D
RF21	76998683	CHIP, 1/16W 68K OHM D
RF22	76998473	CHIP, 1/16W 47K OHM
RF23	76011474	CHIP, 1/20W 470K OHM J
RF24	76011103	CHIP, 1/20W 10K OHM J
RF25	76011153	CHIP, 1/20W 15K OHM J
RF26	76011682	CHIP, 1/20W 6.8K OHM J
RF27	76011332	CHIP, 1/20W 3.3K OHM J
RF29	76011332	CHIP, 1/20W 3.3K OHM J
RF30	76998272	CHIP, 1/16W 2.7K OHM
RF31	76998221	CHIP, 1/16W 220 OHM
RF32	76998182	CHIP, 1/16W 1.8K OHM
RF33	76011220	CHIP, 1/20W 22 OHM J
RF34	76011220	CHIP, 1/20W 22 OHM J
RF36	76011684	CHIP, 1/20W 680K OHM J
RR04	76011330	CHIP, 1/20W 33 OHM J
RR05	76011330	CHIP, 1/20W 33 OHM J
RR06	76011330	CHIP, 1/20W 33 OHM J
RR40	76871750	CHIP, 1/8W 75 OHM J
RR41	76871750	CHIP, 1/8W 75 OHM J
RR42	76871750	CHIP, 1/8W 75 OHM J
RS01	76011222	CHIP, 1/20W 2.2K OHM J
RS03	76011101	CHIP, 1/20W 100 OHM J
RS04	76011101	CHIP, 1/20W 100 OHM J
RS05	76011101	CHIP, 1/20W 100 OHM J
RS06	76011101	CHIP, 1/20W 100 OHM J
RS07	76011104	CHIP, 1/20W 100K OHM J
RS08	76011104	CHIP, 1/20W 100K OHM J
RS09	76011104	CHIP, 1/20W 100K OHM J
RS10	76011104	CHIP, 1/20W 100K OHM J
RS11	76011223	CHIP, 1/20W 22K OHM J
RS12	76011104	CHIP, 1/20W 100K OHM J
RS13	76011104	CHIP, 1/20W 100K OHM J
RS16	76011473	CHIP, 1/20W 47K OHM J
RS17	76011473	CHIP, 1/20W 47K OHM J
RS18	76011103	CHIP, 1/20W 10K OHM J
RS19	76011104	CHIP, 1/20W 100K OHM J
RS20	76011104	CHIP, 1/20W 100K OHM J
RS27	76011222	CHIP, 1/20W 2.2K OHM J
RS28	76011222	CHIP, 1/20W 2.2K OHM J
RS29	76011821	CHIP, 1/20W 820 OHM J
RS30	76011821	CHIP, 1/20W 820 OHM J
RS33	76011473	CHIP, 1/20W 47K OHM J
RS34	76011473	CHIP, 1/20W 47K OHM J
RS35	76011104	CHIP, 1/20W 100K OHM J
RS36	76011101	CHIP, 1/20W 100 OHM J

Location No.	Parts No.	Description
RS39	76011101	CHIP, 1/20W 100 OHM J
RS40	76011472	CHIP, 1/20W 4.7K OHM J
RS41	76011472	CHIP, 1/20W 4.7K OHM J
RS42	76011472	CHIP, 1/20W 4.7K OHM J
RS43	76011472	CHIP, 1/20W 4.7K OHM J
RS44	76011472	CHIP, 1/20W 4.7K OHM J
RS45	76011472	CHIP, 1/20W 4.7K OHM J
RS46	76011472	CHIP, 1/20W 4.7K OHM J
RS47	76011472	CHIP, 1/20W 4.7K OHM J
RS48	76011472	CHIP, 1/20W 4.7K OHM J
RS49	76011472	CHIP, 1/20W 4.7K OHM J
RS52	76011472	CHIP, 1/20W 4.7K OHM J
RS53	76011472	CHIP, 1/20W 4.7K OHM J
RS54	76011472	CHIP, 1/20W 4.7K OHM J
RS55	76011472	CHIP, 1/20W 4.7K OHM J
RS56	76011472	CHIP, 1/20W 4.7K OHM J
RS57	76011104	CHIP, 1/20W 100K OHM J
RS58	76011101	CHIP, 1/20W 100 OHM J
RS59	76011101	CHIP, 1/20W 100 OHM J
RS60	76011101	CHIP, 1/20W 100 OHM J
RS61	76011101	CHIP, 1/20W 100 OHM J
RS62	76011472	CHIP, 1/20W 4.7K OHM J
RS63	76011473	CHIP, 1/20W 47K OHM J
RS64	76011682	CHIP, 1/20W 6.8K OHM J
RS65	76011182	CHIP, 1/20W 1.8K OHM J
RS66	76011100	CHIP, 1/20W 10 OHM J
RS73	76011391	CHIP, 1/20W 390 OHM J
RS74	76011104	CHIP, 1/20W 100K OHM J
RS76	76011221	CHIP, 1/20W 220 OHM J
RS77	76011472	CHIP, 1/20W 4.7K OHM J
RS78	76011102	CHIP, 1/20W 1K OHM J
RS79	76011221	CHIP, 1/20W 220 OHM J
RS80	76011472	CHIP, 1/20W 4.7K OHM J
RS81	76011102	CHIP, 1/20W 1K OHM J
RS85	76011472	CHIP, 1/20W 4.7K OHM J
RS86	76011472	CHIP, 1/20W 4.7K OHM J
RS87	76011101	CHIP, 1/20W 100 OHM J
RS88	76011101	CHIP, 1/20W 100 OHM J
RS89	76011104	CHIP, 1/20W 100K OHM J
RS90	76011391	CHIP, 1/20W 390 OHM J
RS91	76011473	CHIP, 1/20W 47K OHM J
RS92	76011104	CHIP, 1/20W 100K OHM J
RS93	76011222	CHIP, 1/20W 2.2K OHM J
RS94	76011103	CHIP, 1/20W 10K OHM J
RS105	76011102	CHIP, 1/20W 1K OHM J
RS106	76011223	CHIP, 1/20W 22K OHM J
RT01	76011222	CHIP, 1/20W 2.2K OHM J
RT02	76011223	CHIP, 1/20W 22K OHM J
RT03	76011683	CHIP, 1/20W 68K OHM J
RT04	76011102	CHIP, 1/20W 1K OHM J
RT05	76011101	CHIP, 1/20W 100 OHM J
RT06	76011221	CHIP, 1/20W 220 OHM J
RT07	76011561	CHIP, 1/20W 560 OHM J
RT08	76011221	CHIP, 1/20W 220 OHM J
RT09	76011471	CHIP, 1/20W 470 OHM J
RT10	76011222	CHIP, 1/20W 2.2K OHM J
RT11	76011223	CHIP, 1/20W 22K OHM J
RT12	76011683	CHIP, 1/20W 68K OHM J
RT13	76011102	CHIP, 1/20W 1K OHM J
RT14	76011101	CHIP, 1/20W 100 OHM J
RT15	76011151	CHIP, 1/20W 150 OHM J
RT16	76011391	CHIP, 1/20W 390 OHM J
RT17	76011181	CHIP, 1/20W 180 OHM J
RT18	76011471	CHIP, 1/20W 470 OHM J
RT19	76011222	CHIP, 1/20W 2.2K OHM J
RT20	76011223	CHIP, 1/20W 22K OHM J
RT21	76011683	CHIP, 1/20W 68K OHM J
RT22	76011102	CHIP, 1/20W 1K OHM J
RT23	76011101	CHIP, 1/20W 100 OHM J

Location No.	Parts No.	Description
RT24	76011151	CHIP, 1/20W 150 OHM J
RT25	76011391	CHIP, 1/20W 390 OHM J
RT26	76011221	CHIP, 1/20W 220 OHM J
RT27	76011471	CHIP, 1/20W 470 OHM J
RT28	76011103	CHIP, 1/20W 10K OHM J
RT29	76011103	CHIP, 1/20W 10K OHM J
RT30	76011101	CHIP, 1/20W 100 OHM J
RT31	76011471	CHIP, 1/20W 470 OHM J
RV01	76011101	CHIP, 1/20W 100 OHM J
RV02	76011562	CHIP, 1/20W 5.6K OHM J
RV04	76011101	CHIP, 1/20W 100 OHM J
RV05	76011101	CHIP, 1/20W 100 OHM J
RV08	76011101	CHIP, 1/20W 100 OHM J
RV09	76011562	CHIP, 1/20W 5.6K OHM J
RV10	76011101	CHIP, 1/20W 100 OHM J
RV11	76011101	CHIP, 1/20W 100 OHM J
RV12	76011101	CHIP, 1/20W 100 OHM J
RV14	76011101	CHIP, 1/20W 100 OHM J
RV15	76011101	CHIP, 1/20W 100 OHM J
RV16	76011101	CHIP, 1/20W 100 OHM J
RV17	76011101	CHIP, 1/20W 100 OHM J
RV18	76011101	CHIP, 1/20W 100 OHM J
RV19	76011101	CHIP, 1/20W 100 OHM J
RV30	76011101	CHIP, 1/20W 100 OHM J
RV32	76011104	CHIP, 1/20W 100K OHM J
RV33	76011750	CHIP, 1/20W 75 OHM J
RV34	76011750	CHIP, 1/20W 75 OHM J
RV37	76011750	CHIP, 1/20W 75 OHM J
RV39	76011330	CHIP, 1/20W 33 OHM J
RV40	76011101	CHIP, 1/20W 100 OHM J
RV41	76011101	CHIP, 1/20W 100 OHM J
RV43	76011101	CHIP, 1/20W 100 OHM J
RV45	76871681	CHIP, 1/8W 680 OHM J
RV47	76011220	CHIP, 1/20W 22 OHM J
RV50	76011101	CHIP, 1/20W 100 OHM J
RV51	76011101	CHIP, 1/20W 100 OHM J
RV52	76011101	CHIP, 1/20W 100 OHM J
RV53	76011101	CHIP, 1/20W 100 OHM J
RV56	76011101	CHIP, 1/20W 100 OHM J
RV58	76871331	CHIP, 1/8W 330 OHM J
RV59	76871331	CHIP, 1/8W 330 OHM J
RV60	76871331	CHIP, 1/8W 330 OHM J
RV67	76011104	CHIP, 1/20W 100K OHM J
RV68	76011330	CHIP, 1/20W 33 OHM J
RV69	76011330	CHIP, 1/20W 33 OHM J
RV70	76011330	CHIP, 1/20W 33 OHM J
RV71	76011101	CHIP, 1/20W 100 OHM J
RV74	76871471	CHIP, 1/8W 470 OHM J
RV90	76011750	CHIP, 1/20W 75 OHM J
RV91	76872101	CHIP, 1/16W 100 OHM J
RV92	76872750	CHIP, 1/16W 75 OHM J
RV93	76872750	CHIP, 1/16W 75 OHM J
RV94	76872750	CHIP, 1/16W 75 OHM J
RV95	76011750	CHIP, 1/20W 75 OHM J
RV96	76011750	CHIP, 1/20W 75 OHM J
RV97	76011750	CHIP, 1/20W 75 OHM J
RV98	76011750	CHIP, 1/20W 75 OHM J
RV99	76011750	CHIP, 1/20W 75 OHM J
COIL & TRANSFORMERS		
L101	23248398	COIL, CHOKE, TLN3278D
L102	23103828	INDUCTOR, BEAD, TEM2121M
L103	23103828	INDUCTOR, BEAD, TEM2121M
L190	23103828	INDUCTOR, BEAD, TEM2121M
L502	23289022	COIL, PEAKING, TRF4100AT
L504	23289022	COIL, PEAKING, TRF4100AT
L505	23289022	COIL, PEAKING, TRF4100AT
L803	23103302	FERRITE CHOKE, TEM2011AH
L804	23103302	FERRITE CHOKE, TEM2011AH

Location No.	Parts No.	Description
L805	23103302	FERRITE CHOKE, TEM2011AH
L820	23103330	FILTER, FERRITE CHOKE 3.5X5X2 TEM2014AH
L821	23103330	FILTER, FERRITE CHOKE 3.5X5X2 TEM2014AH
L855	23103302	FERRITE CHOKE, TEM2011AH
L856	23103302	FERRITE CHOKE, TEM2011AH
L857	23103302	FERRITE CHOKE, TEM2011AH
L858	23103302	FERRITE CHOKE, TEM2011AH
L859	23103302	FERRITE CHOKE, TEM2011AH
L860	23103302	FERRITE CHOKE, TEM2011AH
L861	23248442	COIL, CHOKE, TLN3515AH
L862	23248442	COIL, CHOKE, TLN3515AH
L864	23248442	COIL, CHOKE, TLN3515AH
L8920	23289047	COIL, PEAKING, TRF4220AU
L8921	23289047	COIL, PEAKING, TRF4220AU
L8930	23289047	COIL, PEAKING, TRF4220AU
L8931	23289047	COIL, PEAKING, TRF4220AU
L8960	23103828	INDUCTOR, BEAD, TEM2121M
L8961	23103828	INDUCTOR, BEAD, TEM2121M
LC29	23103828	INDUCTOR, BEAD, TEM2121M
LC30	23103828	INDUCTOR, BEAD, TEM2121M
LC31	23103828	INDUCTOR, BEAD, TEM2121M
LC32	23103828	INDUCTOR, BEAD, TEM2121M
LC33	23103828	INDUCTOR, BEAD, TEM2121M
LE08	23103302	FERRITE CHOKE, TEM2011AH
LE12	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LE20	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LE21	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LE24	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LE30	23103827	INDUCTOR, BEAD, TEM2120M
LE61	23103302	FERRITE CHOKE, TEM2011AH
LE64	23103302	FERRITE CHOKE, TEM2011AH
LE81	23103302	FERRITE CHOKE, TEM2011AH
LE82	23103302	FERRITE CHOKE, TEM2011AH
LE83	23248432	COIL, CHOKE, TLN3499AH
LE84	23103302	FERRITE CHOKE, TEM2011AH
LE87	23248432	COIL, CHOKE, TLN3499AH
LE91	23103827	INDUCTOR, BEAD, TEM2120M
LE92	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LE94	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LF10	23103885	INDUCTOR, CHIP BEAD 3A 22OHM
LF11	23246911	COIL, CHOKE 13X8H 5.6MMH N TLN3578AH
LF13	23103885	INDUCTOR, CHIP BEAD 3A 22OHM
LF14	23248489	COIL, CHOKE COIL 1.5MMH 8A TLN3639AH
LF21	23246911	COIL, CHOKE 13X8H 5.6MMH N TLN3578AH
LF23	23103885	INDUCTOR, CHIP BEAD 3A 22OHM
LF24	23248489	COIL, CHOKE COIL 1.5MMH 8A TLN3639AH
LF30	23103887	INDUCTOR, CHIP BEAD, TEM2130AM
LF31	23246895	COIL, CHOKE 13X4.6H 33MMH M TLN3561AH
LF32	23246934	COIL, CHOKE 4.5X3.5H 1.0MMH TLN3601AH
LF33	23103888	INDUCTOR, CHIP BEAD, TEM2131AM
LT01	23289027	COIL, PEAKING, TRF4680AT
LT02	23289072	COIL, PEAKING, TRF4151AT
LT03	23289072	COIL, PEAKING, TRF4151AT
LV10	23289022	COIL, PEAKING, TRF4100AT
LV15	23289022	COIL, PEAKING, TRF4100AT
⚠ T801	23211905	COIL, LINE FILTER 26X31H 11MH TRF3228AH
⚠ T802	23211905	COIL, LINE FILTER 26X31H 11MH TRF3228AH
⚠ T805	23217814	TRANSFORMER, CHOKE 4.5MH 1.6A TPW2075AS
⚠ T844	23217673	TRANSFORMER, CHOKE, TPW2060AH
⚠ T845	23217672	TRANSFORMER, CHOKE, TPW2059AL
⚠ T862	23217780	TRANSFORMER, CONVERTER TPW3570AS
⚠ TE62	23217795	TRANSFORMER, CONVERTER TPW3574AS
SEMICONDUCTORS		
Q101	23205506	TRANSISTOR, 2SC4081 Q
Q501	23085049	IC, TB1274BFG(DRY)
Q504	23205507	TRANSISTOR, 2SA1576A Q
Q601	23085839	IC, TV SOUND OUT CPP 12PIN TA8216HQ(5)
Q612	23205346	TRANSISTOR, KTA2014Y/P

Location No.	Parts No.	Description
Q613	23205506	TRANSISTOR, 2SC4081 Q
Q615	23205325	TRANSISTOR, RN2404(F)
Q627	23205325	TRANSISTOR, RN2404(F)
Q651	23009942	IC, LA4525-E
Q652	23205424	TRANSISTOR, KTC2875B/P
Q653	23205424	TRANSISTOR, KTC2875B/P
Q681	23205424	TRANSISTOR, KTC2875B/P
Q682	23205424	TRANSISTOR, KTC2875B/P
Q801	23135080	IC, STRZ4267
Q815	23205506	TRANSISTOR, 2SC4081 Q
Q846	23205506	TRANSISTOR, 2SC4081 Q
Q847	23205506	TRANSISTOR, 2SC4081 Q
Q848	23205506	TRANSISTOR, 2SC4081 Q
Q849	23205346	TRANSISTOR, KTA2014Y/P
Q850	23205506	TRANSISTOR, 2SC4081 Q
Q851	23205507	TRANSISTOR, 2SA1576A Q
△ Q862	23000823	IC, PHOTO COUPLER, TLP421F(GR)
△ Q866	23000823	IC, PHOTO COUPLER, TLP421F(GR)
Q870	23085389	IC, NJM431L
Q891	23009998	IC, BA00JC5WT-V5
Q892	23009998	IC, BA00JC5WT-V5
Q893	23009998	IC, BA00JC5WT-V5
Q894	23085503	IC, OPE AMP, TA75358P
Q4100	23085635	TRANSISTOR, 2SC3437-Y(TE85L,F)
Q4101	23085635	TRANSISTOR, 2SC3437-Y(TE85L,F)
Q4102	23085635	TRANSISTOR, 2SC3437-Y(TE85L,F)
Q4103	23085635	TRANSISTOR, 2SC3437-Y(TE85L,F)
Q8950	23205506	TRANSISTOR, 2SC4081 Q
Q8951	23205506	TRANSISTOR, 2SC4081 Q
Q8952	23205507	TRANSISTOR, 2SA1576A Q
Q8960	23205506	TRANSISTOR, 2SC4081 Q
Q8961	23205506	TRANSISTOR, 2SC4081 Q
QB81	23205446	TRANSISTOR, 2SC2412K, Q T146
QB84	23205446	TRANSISTOR, 2SC2412K, Q T146
QE01	23135072	IC, STRW6765
QE17	23205347	TRANSISTOR, KTC4075Y/P
QE18	23205347	TRANSISTOR, KTC4075Y/P
QE19	23000903	IC, BA00BC0WFP-E2
QE23	23205347	TRANSISTOR, KTC4075Y/P
QE24	23205347	TRANSISTOR, KTC4075Y/P
QE28	23205568	TRANSISTOR, CHIP VCEO=-120V 2SA1163-GR(TE85L,F)
QE29	23205569	TRANSISTOR, CHIP VCEO=120V 2SC2713-GR(TE85L,F)
QE51	23000903	IC, BA00BC0WFP-E2
QE53	23000903	IC, BA00BC0WFP-E2
△ QE62	23000823	IC, PHOTO COUPLER, TLP421F(GR)
QE81	23085389	IC, NJM431L
QE97	23205347	TRANSISTOR, KTC4075Y/P
QE98	23085415	IC, BD4746G
QF05	23085415	IC, BD4746G
QF10	23085807	IC, HTSSOP B20 CONTROL BD9851EFV-E2
QF12	23205582	TRANSISTOR, FET RSS090P03 RSS090P03TB
QF22	23205582	TRANSISTOR, FET RSS090P03 RSS090P03TB
QF30	23135095	IC, CHOPPER REG PQ1CX12H2ZPQ T
QS01	23009916	IC, MM1631AJBE
QS02	23009614	IC, CD4053BNSR
QS03	23205424	TRANSISTOR, KTC2875B/P
QS04	23205424	TRANSISTOR, KTC2875B/P
QS05	23205325	TRANSISTOR, RN2404(F)
QS08	23205347	TRANSISTOR, KTC4075Y/P
QS09	23205347	TRANSISTOR, KTC4075Y/P
QS10	23205424	TRANSISTOR, KTC2875B/P
QS11	23205424	TRANSISTOR, KTC2875B/P
QS13	23205424	TRANSISTOR, KTC2875B/P
QS14	23205424	TRANSISTOR, KTC2875B/P
QS19	23205347	TRANSISTOR, KTC4075Y/P
QS20	23205347	TRANSISTOR, KTC4075Y/P
QS21	23205347	TRANSISTOR, KTC4075Y/P
QS52	23205347	TRANSISTOR, KTC4075Y/P
QS53	23205346	TRANSISTOR, KTA2014Y/P

Location No.	Parts No.	Description
QS108	23205347	TRANSISTOR, KTC4075Y/P
QT01	23205507	TRANSISTOR, 2SA1576A Q
QT02	23205506	TRANSISTOR, 2SC4081 Q
QT03	23205507	TRANSISTOR, 2SA1576A Q
QT04	23205507	TRANSISTOR, 2SA1576A Q
QT05	23205506	TRANSISTOR, 2SC4081 Q
QT06	23205507	TRANSISTOR, 2SA1576A Q
QT07	23205507	TRANSISTOR, 2SA1576A Q
QT08	23205506	TRANSISTOR, 2SC4081 Q
QT09	23205507	TRANSISTOR, 2SA1576A Q
QT10	23085758	IC, VIDEO SW 5IN-1OUT BA7649AF
QT11	23205402	TRANSISTOR, DTC144EUA
QT12	23205402	TRANSISTOR, DTC144EUA
QT13	23205507	TRANSISTOR, 2SA1576A Q
QV01	23009940	IC, MM1630AQ
QV03	23205506	TRANSISTOR, 2SC4081 Q
QV04	23205506	TRANSISTOR, 2SC4081 Q
QV05	23205506	TRANSISTOR, 2SC4081 Q
QV06	23205506	TRANSISTOR, 2SC4081 Q
QV10	23205443	TRANSISTOR, 2SA1162-Y(F)
D601	23357703	DIODE, 1SS355
D602	23357703	DIODE, 1SS355
D603	23357703	DIODE, 1SS355
D604	23357703	DIODE, 1SS355
D611	23357703	DIODE, 1SS355
D612	23357703	DIODE, 1SS355
D613	23357703	DIODE, 1SS355
D614	23357703	DIODE, 1SS355
D615	23357703	DIODE, 1SS355
D616	23357703	DIODE, 1SS355
D617	23357703	DIODE, 1SS355
D618	23357703	DIODE, 1SS355
D619	23357703	DIODE, 1SS355
D620	23357703	DIODE, 1SS355
D621	23357703	DIODE, 1SS355
D622	23357703	DIODE, 1SS355
D623	23357703	DIODE, 1SS355
D651	23357703	DIODE, 1SS355
D652	23357703	DIODE, 1SS355
D653	23357703	DIODE, 1SS355
D654	23357703	DIODE, 1SS355
D801	23357712	DIODE, D5SB60, 4009 F05
D805	23357850	DIODE, ZENER, MTZJ9.1A
D806	23357893	DIODE, ZENER, MTZJ27C
D809	23357905	DIODE, ZENER, MTZJ36C
D810	23357893	DIODE, ZENER, MTZJ27C
D811	23357511	DIODE, AG01A
D812	23357852	DIODE, ZENER, MTZJ9.1C
D813	23357512	DIODE, AL01Z
D815	23357748	DIODE, ZENER, MA8062-M
D840	23357703	DIODE, 1SS355
D841	23357703	DIODE, 1SS355
D842	23357748	DIODE, ZENER, MA8062-M
D843	23362216	DIODE, CHIP VRM=80V IO=50MA DAN202UT106
D850	23362234	DIODE, VRRM=800 IO=10A YG225D8F111
D855	23362233	DIODE, VRRM=40V IO=10A YG802C04RF119
D857	23362136	DIODE, YG801C04RF119
D859	23362210	DIODE, SCHOTTKY VRM90V 6A RB095T-90
D870	23357703	DIODE, 1SS355
D899	76000656	VARISTOR, TNR15G471K
D8950	23362216	DIODE, CHIP VRM=80V IO=50MA DAN202UT106
D8951	23357745	DIODE, ZENER, MA8056-M
D8960	23357506	DIODE, DAP202U
D8961	23357745	DIODE, ZENER, MA8056-M
DB81	23358619	LED, LAMP BLUE 21P1XEL SLA580BCT
DB82	23311148	LAMP, LAMP YELLOW SLI-580YT
DB83	23357406	DIODE, ZENER, UDZS5.6B
DB84	23357406	DIODE, ZENER, UDZS5.6B
DB85	23357406	DIODE, ZENER, UDZS5.6B

Location No.	Parts No.	Description
DB86	23357406	DIODE, ZENER, UDZS5.6B
DE01	23362046	DIODE, LN1WBA60 4101
DE08	23357709	DIODE, RU1P
DE30	23362097	DIODE, ZENER, DZ16 BS B
DE31	23357873	DIODE, ZENER, MTZJ16A
DE41	23362140	DIODE, KDS160-RTK
DE62	23357900	DIODE, ZENER, MTZJ33B
DE63	23357892	DIODE, ZENER, MTZJ27B
DE64	23357366	DIODE, FR105-B5
DE66	23357842	DIODE, ZENER, MTZJ6.8B
DE71	23357697	DIODE, 1SS133
DE72	23357697	DIODE, 1SS133
DE81	23362210	DIODE, SCHOTTKY VRM90V 6A RB095T-90
DE82	23362136	DIODE, YG801C04RF119
DE84	23357366	DIODE, FR105-B5
DE97	23357703	DIODE, 1SS355
DE98	23357703	DIODE, 1SS355
DF10	23362211	DIODE, SCHOTTKY VRM35V 6A RB095B-30TL
DF11	23362054	DIODE, RB521S-30
DF12	23362230	DIODE, ZENER VZ=4.7-5.2 PMDS PTZ4.7B TE25
DF20	23362211	DIODE, SCHOTTKY VRM35V 6A RB095B-30TL
DF21	23362054	DIODE, RB521S-30
DF22	23362258	DIODE, ZENER VZ=3.9-4.4 PMDS PTZ3.9B TE25
DF30	23362214	DIODE, SCHOTTKY VRM30 IO3.0 RSX301L-30 TE25
DF31	23357703	DIODE, 1SS355
DF32	23357739	DIODE, ZENER, MA8047-M
DR44	23357762	DIODE, ZENER, MA8091-M
DR45	23357762	DIODE, ZENER, MA8091-M
DS13	23357703	DIODE, 1SS355
DS16	23357744	DIODE, ZENER, MA8056-L
DV01	23357762	DIODE, ZENER, MA8091-M
DV02	23357762	DIODE, ZENER, MA8091-M
DV04	23357762	DIODE, ZENER, MA8091-M
DV05	23357762	DIODE, ZENER, MA8091-M
DV07	23357762	DIODE, ZENER, MA8091-M
DV08	23357762	DIODE, ZENER, MA8091-M
DV09	23357762	DIODE, ZENER, MA8091-M
DV10	23357762	DIODE, ZENER, MA8091-M
DV12	23357762	DIODE, ZENER, MA8091-M
DV13	23357762	DIODE, ZENER, MA8091-M
DV15	23357762	DIODE, ZENER, MA8091-M
DV16	23357762	DIODE, ZENER, MA8091-M
DV17	23357762	DIODE, ZENER, MA8091-M
DV24	23357762	DIODE, ZENER, MA8091-M
MISCELLANEOUS		
A306	23717198	SCREW, THUMB SCREW RETAINER
A512	23717443	SCREW, SCREW, AV BOARD ECO
A513	23717443	SCREW, SCREW, AV BOARD ECO
A621	23717443	SCREW, SCREW, AV BOARD ECO
B206	23974994	BAND, KESSOKU
B228	23059239	BACK TERM BOARD, ASIA 62CM9UA
B230	23738088	SCREW, BTBW3X12ECO
B231	23738088	SCREW, BTBW3X12ECO
B233	23738088	SCREW, BTBW3X12ECO
B235	23738088	SCREW, BTBW3X12ECO
B898	23165495	TERMINAL, EARTH PHI3 MET31-0332
B899	23165495	TERMINAL, EARTH PHI3 MET31-0332
BB02A	23713974	CONNECTOR, BB 100P PLUG 1-5175473-0
BB20A	23713729	SOCKET, B-B 8P 2.5MM
BB20B	23713729	SOCKET, B-B 8P 2.5MM
BB20C	23368627	PLUG, B-B 8P, 08TM-2.5FJ-E
BB30B	23713814	SOCKET, 127301109K2
BB41	23903245	SOCKET, B-B 46P, TAC-A46X-B1
BB42	23713810	PLUG, TAC-A46P-B1
D801B	23717240	SCREW
D850B	23717241	SCREW, BITTB3X8ECO
D855B	23717241	SCREW, BITTB3X8ECO
D857B	23717241	SCREW, BITTB3X8ECO

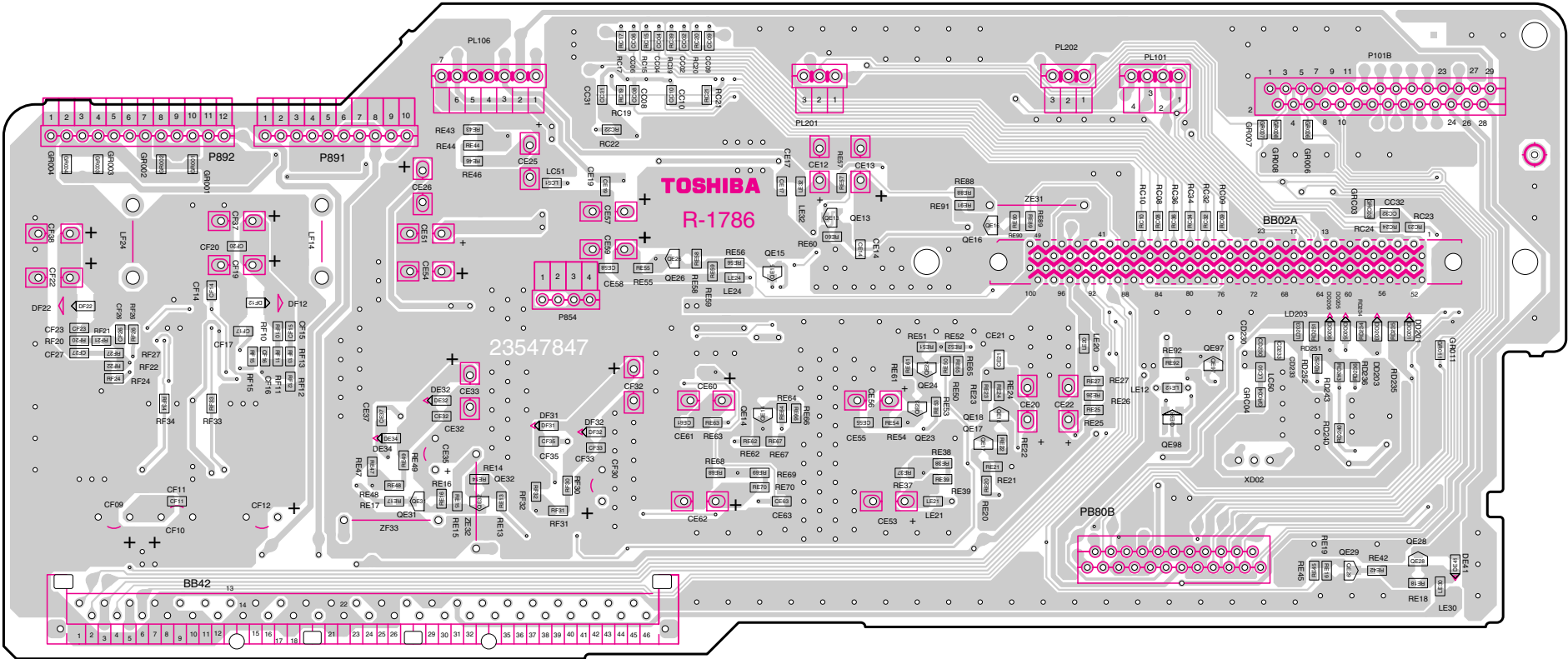
Location No.	Parts No.	Description
D859B	23717241	SCREW, BITTB3X8ECO
DE81B	23717241	SCREW, BITTB3X8ECO
DE82B	23717241	SCREW, BITTB3X8ECO
△F801	23144303	FUSE, CARTRIDGE, 250V 5A, 5.2X20
F801A	23165433	FUSE HOLDER, 5.2
△F820	23144378	FUSE, RADIAL LEAD SUB-MINIATUR 250V 2A
△F845	23144375	FUSE, RADIAL LEAD SUB-MINIATUR 250V 1A
△F899	23144300	FUSE, CARTRIDGE, 250V 2A, 5.2X20
F899A	23165433	FUSE HOLDER, 5.2
△FE01	23144375	FUSE, RADIAL LEAD SUB-MINIATUR 250V 1A
GJ04	76000445	CHIP JUMPER, 1608TYPE
GJ05	76000445	CHIP JUMPER, 1608TYPE
GJ413	76000445	CHIP JUMPER, 1608TYPE
GJ414	76000445	CHIP JUMPER, 1608TYPE
GR003	76000576	CHIP JUMPER, 3216TYPE
GR004	76000576	CHIP JUMPER, 3216TYPE
GR02	76000445	CHIP JUMPER, 1608TYPE @UV01
	76000445	CHIP JUMPER, 1608TYPE @U107
GR03	76000445	CHIP JUMPER, 1608TYPE @UV01
	76000445	CHIP JUMPER, 1608TYPE @U107
GR05	76000445	CHIP JUMPER, 1608TYPE
GR06	76000445	CHIP JUMPER, 1608TYPE
GR112	76000445	CHIP JUMPER, 1608TYPE
GR113	76000445	CHIP JUMPER, 1608TYPE
GR510	76000445	CHIP JUMPER, 1608TYPE
GR601	76000445	CHIP JUMPER, 1608TYPE
GR602	76000445	CHIP JUMPER, 1608TYPE
GR612	76000445	CHIP JUMPER, 1608TYPE
GR613	76000445	CHIP JUMPER, 1608TYPE
GRR44	76000445	CHIP JUMPER, 1608TYPE
GRS01	76000445	CHIP JUMPER, 1608TYPE
GRV01	76000445	CHIP JUMPER, 1608TYPE
GRV02	76000445	CHIP JUMPER, 1608TYPE
GRV03	76000445	CHIP JUMPER, 1608TYPE
GRV04	76000445	CHIP JUMPER, 1608TYPE
GRV05	76000445	CHIP JUMPER, 1608TYPE
GRV06	76000445	CHIP JUMPER, 1608TYPE
GRV07	76000445	CHIP JUMPER, 1608TYPE
GRV08	76000445	CHIP JUMPER, 1608TYPE
GRV09	76000445	CHIP JUMPER, 1608TYPE
GRV10	76000445	CHIP JUMPER, 1608TYPE
GRV11	76000445	CHIP JUMPER, 1608TYPE
GRV12	76000445	CHIP JUMPER, 1608TYPE
GRV13	76000445	CHIP JUMPER, 1608TYPE
GRV14	76000445	CHIP JUMPER, 1608TYPE
GRV37	76000445	CHIP JUMPER, 1608TYPE
GRV38	76000445	CHIP JUMPER, 1608TYPE
GRV39	76000445	CHIP JUMPER, 1608TYPE
GRV40	76000445	CHIP JUMPER, 1608TYPE
GRV41	76000445	CHIP JUMPER, 1608TYPE
GRV42	76000445	CHIP JUMPER, 1608TYPE
GRV43	76000445	CHIP JUMPER, 1608TYPE
GRV44	76000445	CHIP JUMPER, 1608TYPE
GRV45	76000445	CHIP JUMPER, 1608TYPE
GRV46	76000445	CHIP JUMPER, 1608TYPE
GRV47	76000445	CHIP JUMPER, 1608TYPE
GRV48	76000445	CHIP JUMPER, 1608TYPE
GRV49	76000445	CHIP JUMPER, 1608TYPE
GRV50	76000445	CHIP JUMPER, 1608TYPE
GRV51	76000445	CHIP JUMPER, 1608TYPE
GRV52	76000445	CHIP JUMPER, 1608TYPE
GRV53	76000445	CHIP JUMPER, 1608TYPE
GRV54	76000445	CHIP JUMPER, 1608TYPE
GRV55	76000445	CHIP JUMPER, 1608TYPE
GRV56	76000445	CHIP JUMPER, 1608TYPE
GRV57	76000445	CHIP JUMPER, 1608TYPE
GRV58	76000445	CHIP JUMPER, 1608TYPE
GT01	76000445	CHIP JUMPER, 1608TYPE
GT02	76000445	CHIP JUMPER, 1608TYPE

Location No.	Parts No.	Description
GT03	76000445	CHIP JUMPER, 1608TYPE
KB01	23000852	REMOCON RECEIVER, PIC-37043TE2
M101	23389322	CABLE, P1.25-29-70 P1.25-29-70
M811A	23103778	FERRITE CORE, TFE1008
M811B	23103778	FERRITE CORE, TFE1008
M906A	23103839	FERRITE CORE, TFE1012
M906B	23103778	FERRITE CORE, TFE1008
M906C	23103778	FERRITE CORE, TFE1008
MB91A	23103839	FERRITE CORE, TFE1012
MJ22	23389361	CABLE, FFC P0.5-50-150 GOLD P0.5-50-80 GOLD
MJ60	23389361	CABLE, FFC P0.5-50-150 GOLD P0.5-50-80 GOLD
MV01B	23103840	FERRITE CORE, TFE1013
MV01C	23103839	FERRITE CORE, TFE1012
MV60A	23103778	FERRITE CORE, TFE1008
P101B	23713285	CONNECTOR, 29FE-ST-VK-N
P661	23023328	JACK, HEAD PHONE, 3.5MM
P800	23713702	PLUG, 2P 11.88MM W VT
⚠ P801	#1 23372246	POWER CORD, 250V 7.5A SAA
⚠	#2 23372354	POWER CORD, UK-HK-PSB 10A 250V MP5004A 10A 250V
⚠	#3 23372298	POWER CORD, 250V2.5A
⚠	#4 23372246	POWER CORD, 250V 7.5A SAA
⚠	#5 23372354	POWER CORD, UK-HK-PSB 10A 250V MP5004A 10A 250V
⚠	#6 23372298	POWER CORD, 250V2.5A
P805	23164965	PLUG, 4P, W-P3504-#02
P811A	23713713	PLUG, 2P 3.96MM VH
P891	23713761	PLUG, NP 2.5MM G, B10B-EH-F1A
P892	23713763	PLUG, NP 2.5MM G, B12B-EH-F1A
P901	23713754	PLUG, 3P 2.5MM G, B3B-EH-F1-TV4
P902A	23164563	PLUG, 3P
P903	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
PB80A	23713819	SOCKET, TWG-P23X-A1
PB92	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
PJ17B	23713755	PLUG, 4P 2.5MM G, B4B-EH-F1-TV4
PJ22A	23757180	CONNECTOR, FH12-50S-0.5SV(55)
PJ60A	23757180	CONNECTOR, FH12-50S-0.5SV(55)
PS01	23023449	JACK, PIN 7P JLC YKC21-8600N
PS02	23023328	JACK, HEAD PHONE, 3.5MM
PV02	23365949	JACK, 5P, 1E:OFF+2R:OFF+2L:OFF
PV03	23365949	JACK, 5P, 1E:OFF+2R:OFF+2L:OFF
PV05	23023301	JACK, Y/C YKF51-5575
PV15B	23713761	PLUG, NP 2.5MM G, B10B-EH-F1A
PV25A	23713761	PLUG, NP 2.5MM G, B10B-EH-F1A
PV90	23713710	SOCKET, D-SUB 15P, KRD-8622
Q601B	23717240	SCREW
QE01B	23717241	SCREW, BITTB3X8ECO
⚠ S810	23344522	SWITCH, SPVF11
SA1	23344507	SWITCH, PUSH, SKHHLMA010
SA2	23344507	SWITCH, PUSH, SKHHLMA010
SA3	23344507	SWITCH, PUSH, SKHHLMA010
SA4	23344507	SWITCH, PUSH, SKHHLMA010
SA5	23344507	SWITCH, PUSH, SKHHLMA010
SA6	23344507	SWITCH, PUSH, SKHHLMA010
SA7	23344507	SWITCH, PUSH, SKHHLMA010
SA8	23344507	SWITCH, PUSH, SKHHLMA010
⚠ SR81	23146590	RELAY, DLS5D1-O(M)0.25W
⚠ SR82	23146584	RELAY, DC12V, TV5, DG-3
W661A	23351334	SPEAKER, 120X120 16-OHM 10W SPK-1480AO
W661B	23351334	SPEAKER, 120X120 16-OHM 10W SPK-1480AO
W662A	23351334	SPEAKER, 120X120 16-OHM 10W SPK-1480AO
W662B	23351334	SPEAKER, 120X120 16-OHM 10W SPK-1480AO
X501	23153612	CRYSTAL, 16.200 25PPM 25OHM
Z801A	23103778	FERRITE CORE, TFE1008
⚠ Z855	23144195	PROTECTOR, 20PSERIES 125V 5A
⚠ Z857	23144195	PROTECTOR, 20PSERIES 125V 5A
⚠ Z859	23144194	PROTECTOR, 20PSERIES 125V 4A
⚠ ZE31	23144187	PROTECTOR, 20PSERIES, 125V 1.5A
⚠ ZE81	23144194	PROTECTOR, 20PSERIES 125V 4A
⚠ ZE82	23144194	PROTECTOR, 20PSERIES 125V 4A
⚠ ZE84	23144184	PROTECTOR, 20PSERIES 125V 630MA

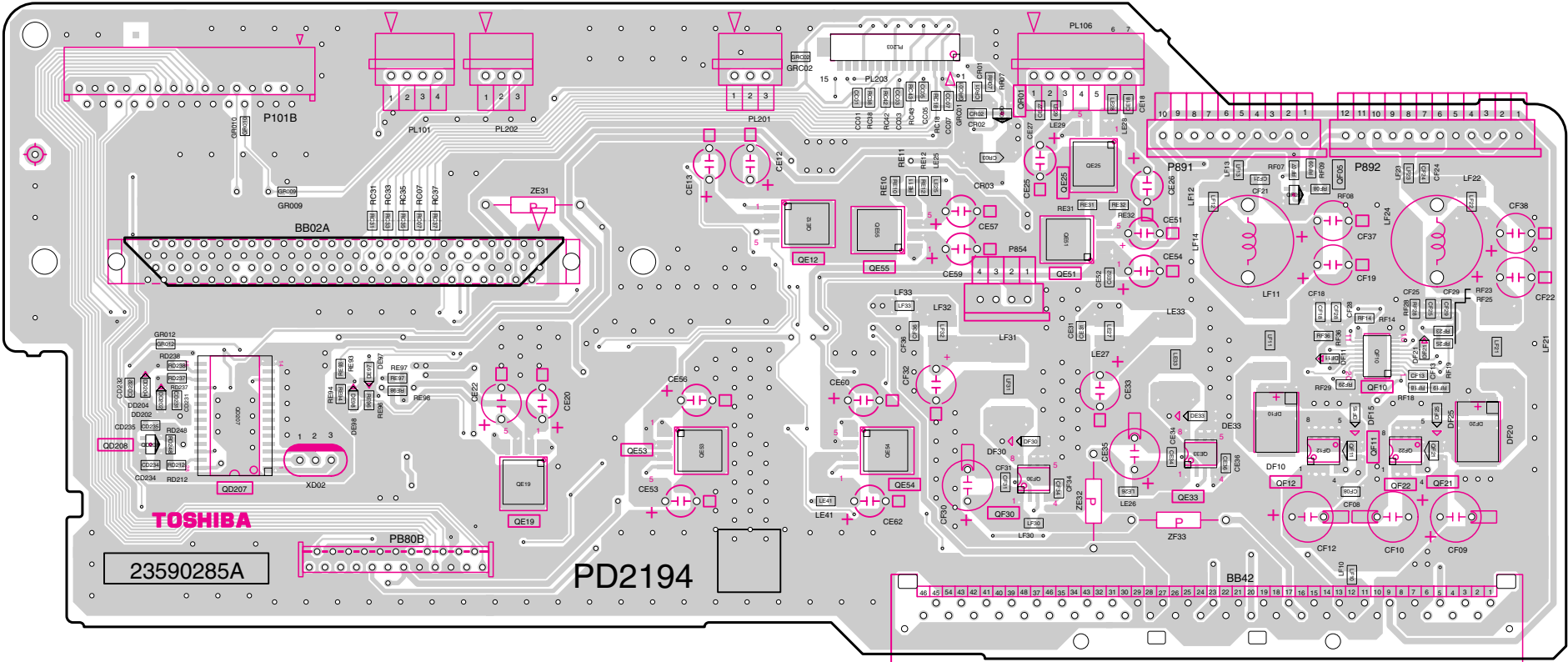
Location No.	Parts No.	Description
ZF33	23144187	PROTECTOR, 20PSERIES, 125V 1.5A
PC BOARD ASSEMBLIES		
* U102	23764781	MOTHER UNIT PD2194T, CM9ZZ
* U107	23764782	TIF UNIT PD2195T, CM9ZZ
* U801	23764783	MAIN POWER PD2192T-1, CM9ZZ
* U802	23764784	SUB POWER PD2192T-2, CM9ZZ
* UA02	23764785	RMT SENSOR UNIT PD2192T-3, CM9ZZ
* UA03	23764786	DOOR SW UNIT PD2192T-4, CM9ZZ
* UA04	23764787	FRONT SW UNIT PD2192T-5, CM9ZZ
* UA05	23764788	LED UNIT PD2192T-6, CM9ZZ
* UD01	23148452	CM9 SIGNAL UNIT, B910PD2299G1
* UV01	23764789	BACK AV UNIT PD2306T-1, CM9ZZ
* UV03	23764790	FRONT AV UNIT PD2306T-2, CM9ZZ
TUNER		
H001	23321499	TUNER, ENG39A07GF, TIF CHI HOR61 IEC PAL+M
ACCESSORIES		
A701	#1 23015326	CARTON, CARTON 62CM9UA
	#2 23015326	CARTON, CARTON 62CM9UE
	#3 23015326	CARTON, CARTON 62CM9UR
	#4 23015325	CARTON, CARTON 72CM9UA
	#5 23015325	CARTON, CARTON 72CM9UE
	#6 23015325	CARTON, CARTON 72CM9UR
A703	#1 23580162	PACKING, TOP PACK 62CM9UA
	#2 23580162	PACKING, TOP PACK 62CM9UE
	#3 23580162	PACKING, TOP PACK 62CM9UR
	#4 23580160	PACKING, TOP PACKING 72CM9UA
	#5 23580160	PACKING, TOP PACKING 72CM9UE
	#6 23580160	PACKING, TOP PACKING 72CM9UR
A704	23845450	JOINT
A708	#1 23580163	PACKING, BOTTOM PACK 62CM9UA
	#2 23580163	PACKING, BOTTOM PACK 62CM9UE
	#3 23580163	PACKING, BOTTOM PACK 62CM9UR
	#4 23580161	PACKING, BOTTOM PACKING 72CM9UA
	#5 23580161	PACKING, BOTTOM PACKING 72CM9UE
	#6 23580161	PACKING, BOTTOM PACKING 72CM9UR
A710	#1 23918417	CARTON, SUPPORT POST 62CM9UA
	#2 23918417	CARTON, SUPPORT POST 62CM9UE
	#3 23918417	CARTON, SUPPORT POST 62CM9UR
	#4 23918401	CARTON, SUPPORT POST 72CM9UA
	#5 23918401	CARTON, SUPPORT POST 72CM9UE
	#6 23918401	CARTON, SUPPORT POST 72CM9UR
A801	23448747	CASE, COVER TRAY 72CM9ZZ
K902	23306590	REMOCON HAND UNIT, CT-90126
⚠ Y101E	#1 23566843	OWNERS MANUAL, ENGLISH 62CM9UA
⚠	#2 23566843	OWNERS MANUAL, ENGLISH 62CM9UE
⚠	#4 23566843	OWNERS MANUAL, ENGLISH 72CM9UA
⚠	#5 23566843	OWNERS MANUAL, ENGLISH 72CM9UE
⚠ Y101R	#3 23566844	OWNERS MANUAL, ENGLISH/RUSSIAN 62CM9UR
⚠	#6 23566844	OWNERS MANUAL, ENGLISH/RUSSIAN 72CM9UR
Y109	23943846	BAG, POLY
CABINET PARTS		
⚠ A025	23940403	PIECE, 05 LAMP TUNNEL ASSY
⚠ A026	23940657	PIECE, 05 LAMP DOOR ASSY
A100	23533749	COVER, BASE PURCHASE ASSY KIT 72CM9UA
⚠ A102	#1 23527397	GRILLE, SPK GRILL ASY LEFT 62CM9UA
⚠	#2 23527397	GRILLE, SPK GRILL ASY LEFT 62CM9UE
⚠	#3 23527397	GRILLE, SPK GRILL ASY LEFT 62CM9UR
⚠	#4 23527407	GRILLE, SPK GRILL ASY LEFT 72CM9UA
⚠	#5 23527407	GRILLE, SPK GRILL ASY LEFT 72CM9UE
⚠	#6 23527407	GRILLE, SPK GRILL ASY LEFT 72CM9UR

MOTHER BOARD PD2194T (U102)
BOTTOM (FOIL) SIDE

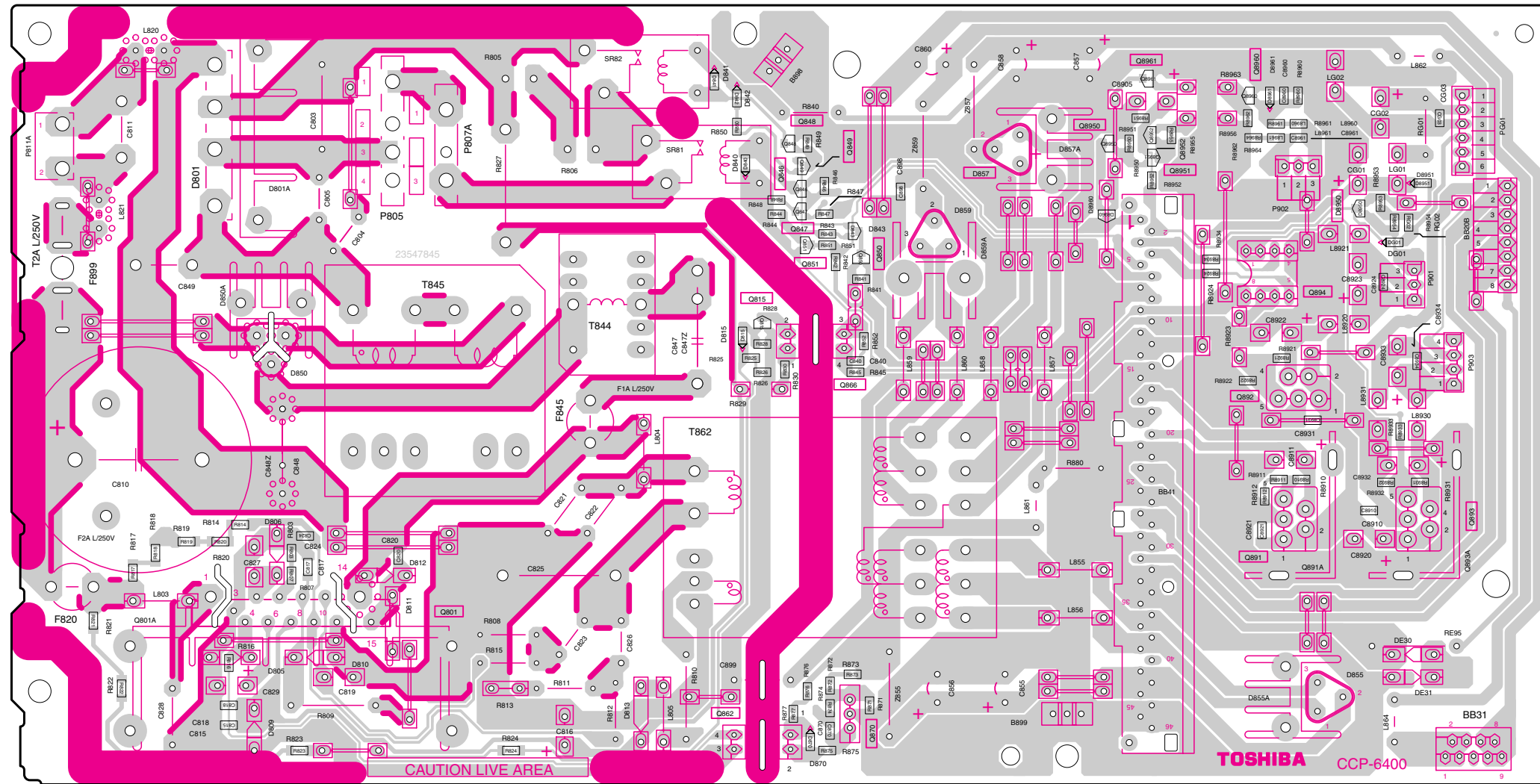
SIGNAL PC Board of this model is provided only the assembly replacement for servicing. Therefore, SIGNAL PC Boards of top and bottom views does not describes in this section.



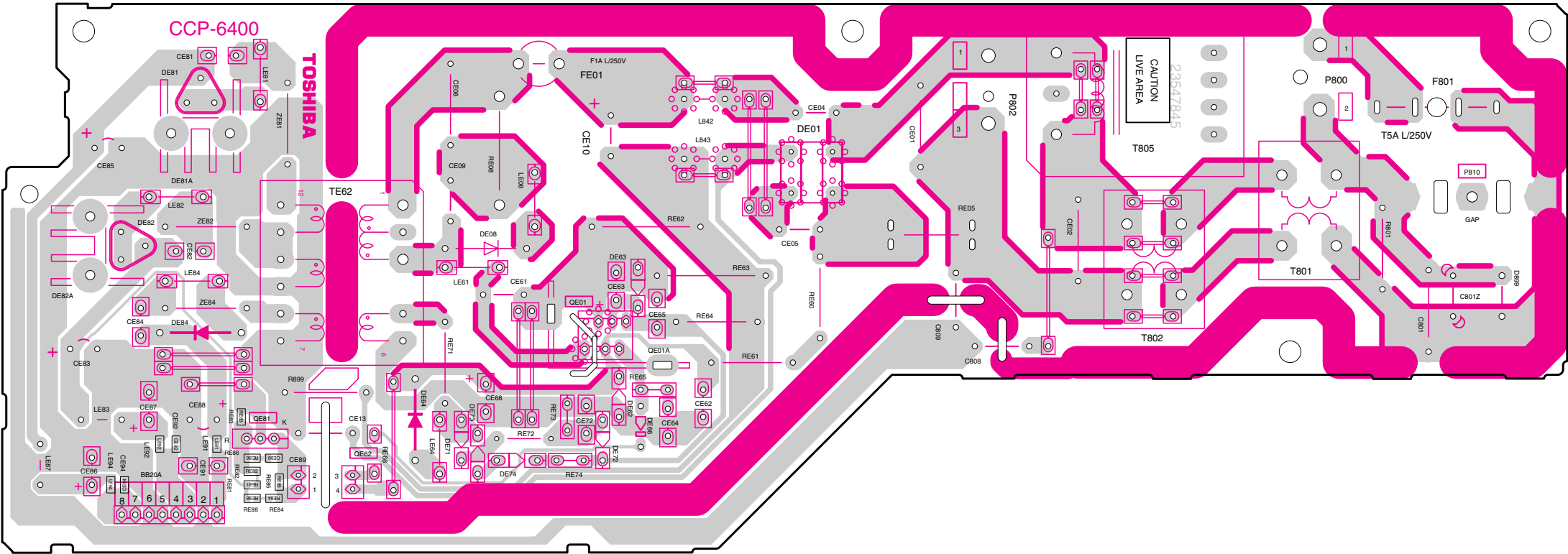
MOTHER BOARD PD2194T (U102)
TOP (COMPONENT) SIDE



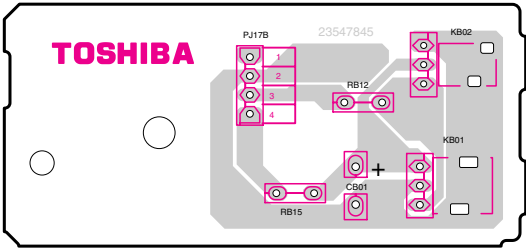
MAIN POWER BOARD PD2192T-1 (U801)
BOTTOM (FOIL) SIDE



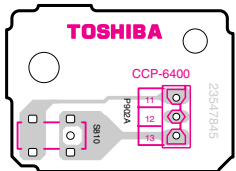
SUB POWER BOARD PD2192T-2 (U802)
BOTTOM (FOIL) SIDE



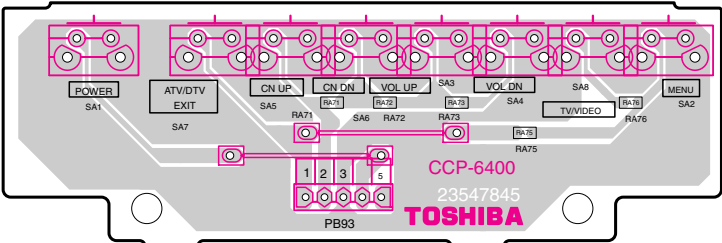
RMT SENSOR BOARD PD2192T-3 (UA02)
BOTTOM (FOIL) SIDE



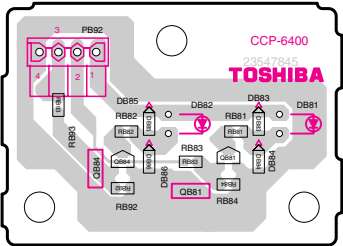
DOOR SW BOARD PD2192T-4 (UA03)
BOTTOM (FOIL) SIDE



FRONT SW BOARD PD2192T-5 (UA04)
BOTTOM (FOIL) SIDE

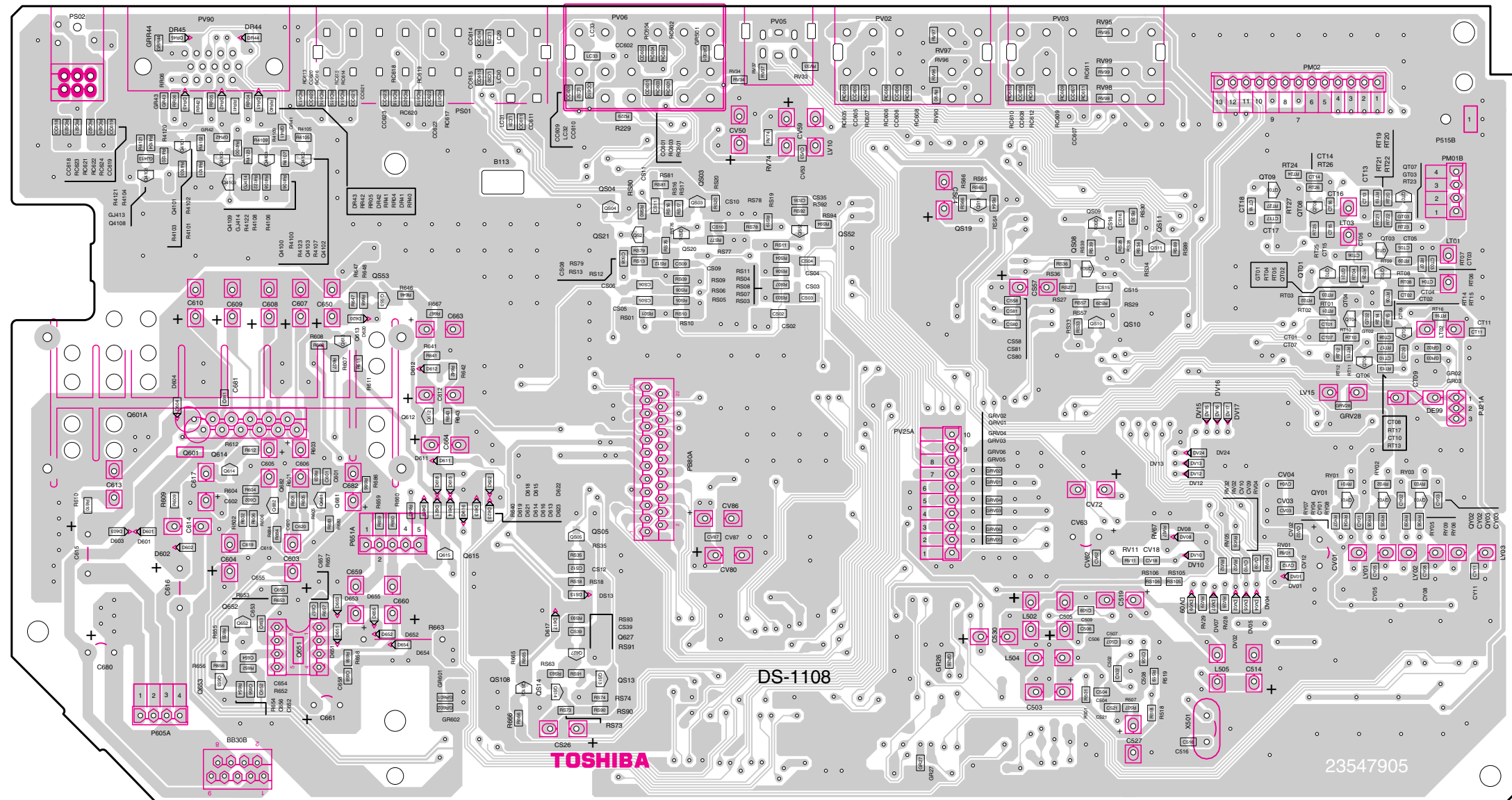


LED BOARD PD2192T-6 (UA05)
BOTTOM (FOIL) SIDE



BACK AV BOARD PD2306T-1 (UV01)

BOTTOM (FOIL) SIDE



SCHEMATIC DIAGRAM

MODEL : 62CM9UA/UE/UR / 72CM9UA/UE/UR

WARNING : BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS ON PAGES 3 AND 4 OF THIS MANUAL.

CAUTION : The international hazard symbols " \triangle " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the SAFETY PRECAUTION and PRODUCT SAFETY NOTICE instructions on pages 3 and 4 of this manual. Do not degrade the safety of the receiver through improper servicing.

NOTE:

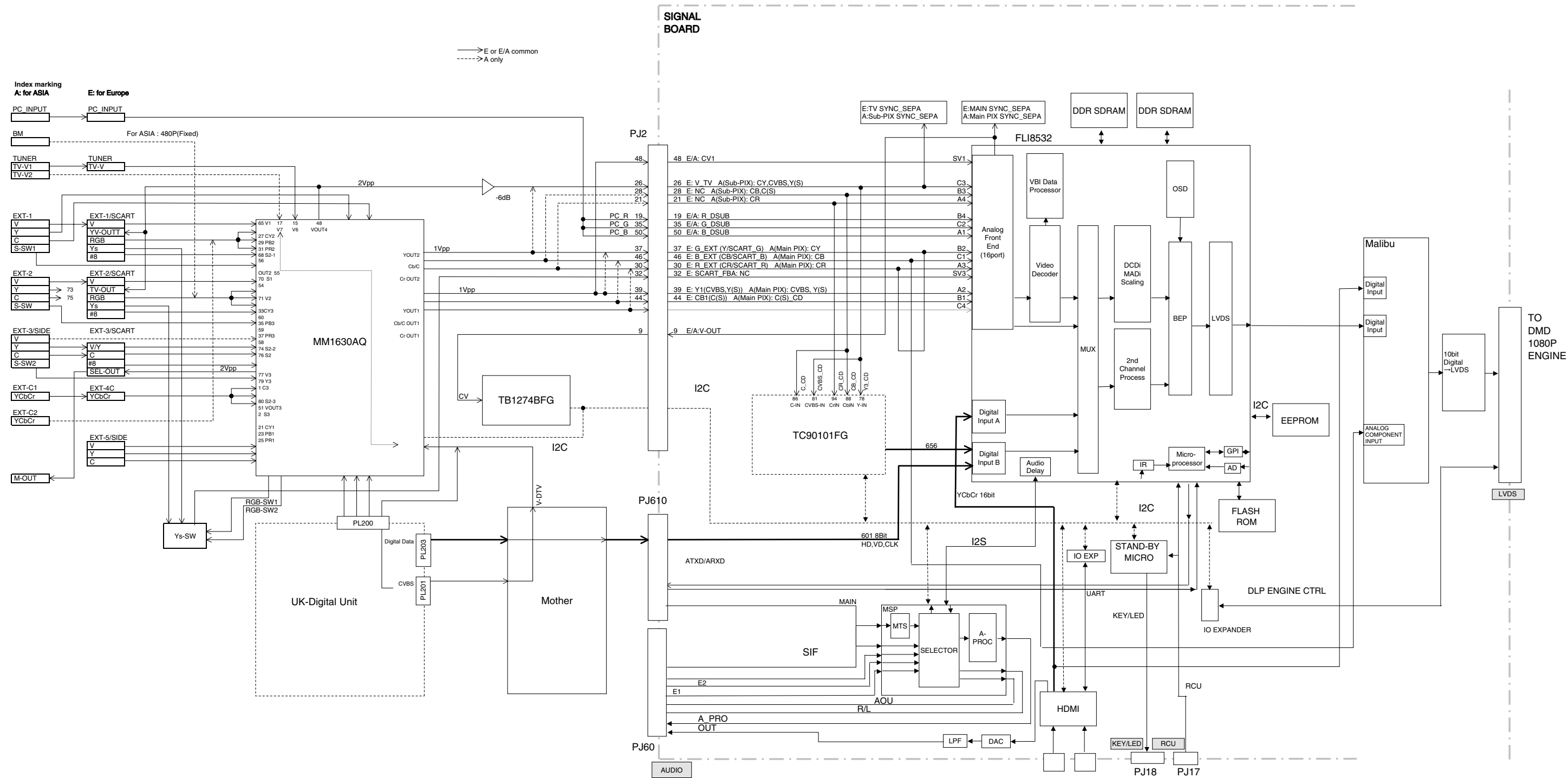
1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
 1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon compstion of 1/2 watt
 1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
 K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.
 All capacitors are ceramic 50V, unless otherwise noted as the following marks.
 $\text{---} \text{---} \text{---}$ Electrolytic capacitor $\text{---} \text{---} \text{---}$ Mylar capacitor
3. The parts indicated with " \triangle " have special characteristics, and should be replaced with identical parts only.

SIGNAL PC Board of this model is provided only the assembly replacement for servicing. Therefore, SIGNAL schematic diagrams does not describes in this section.

■ SCHEMATIC DIAGRAM STRUCTURE:

CONNECTOR	1/19
MOTHER —————	
MOTHER CONNECTOR	[SHEET-1/3] 2/19
MOTHER REG	[SHEET-2/3] 3/19
MOTHER INTERFACE	[SHEET-3/3] 4/19
TIF	5/19
MAIN POWER —————	
MAIN POWER	[SHEET-1/3] 6/19
REG/PROTECT/SW	[SHEET-2/3] 7/19
MAIN POWER CONNECTOR	[SHEET-3/3] 8/19
SUB POWER	9/19
REM SW	10/19
SIDE KEY/LED	11/19
BACK AV —————	
CONNECTOR	[SHEET-1/7] 12/19
AV TERMINAL	[SHEET-2/7] 13/19
VIDEO SW	[SHEET-3/7] 14/19
AUDIO SW	[SHEET-4/7] 15/19
AUDIO OUT/MUTE	[SHEET-5/7] 16/19
TEXT SW	[SHEET-6/7] 17/19
COLOR DECORDER	[SHEET-7/7] 18/19
SIDE AV	19/19

CIRCUIT BLOCK DIAGRAM



SPECIFICATIONS

Model	62CM9UA/62CM9UE/62CM9UR/72CM9UA/72CM9UE/72CM9UR		
Power source	220V - 240V AC, 50 Hz		
Power consumption	265W, 0.9W (standby)		
Dimensions	62CM9UA/62CM9UE/62CM9UR: 1,450mm (W) 475mm (D) 994mm (H) 72CM9UA/72CM9UE/72CM9UR: 1,672mm (W) 550mm (D) 1,119mm (H)		
Mass (Weight)	62CM9UA/62CM9UE: 49.5kg, 62CM9UR: 46.7kg, 72CM9UA/72CM9UE: 58.5kg, 72CM9UR: 55.3kg		
Television system (Antenna input)	Channel coverage: PAL B/G (CCIR) VHF 2 - 12 UHF 21 - 69 CATV X - Z+2, S1 - S41 PAL I (UK) VHF - UHF 21 - 69 CATV - PAL D/K (CHINA) VHF 1 - 12 UHF 13 - 57 CATV Z1 - Z38 SECAM B/G (CCIR) VHF 2 - 12 UHF 21 - 69 CATV X - Z+2, S1 - S41 SECAM D/K (OIRT) VHF 1 - 12 UHF 21 - 69 CATV X1 - X19 NTSC M (US) VHF 2 - 13 UHF 14 - 69 CATV A6 - A1, A - W, AA - ZZ, AAA, BBB NTSC M (JAPAN) VHF 1 - 12 UHF 13 - 62 CATV M1 - M10, S1 - S41 Special RF signal: NTSC 4.43 color system 5.5/6.0/6.5 MHz sound system PAL 60 Hz color system 5.5/6.0/6.5 MHz sound system 480i, 480p, 576i, 576p, 720p (50/60 Hz), 1080i (50/60 Hz)		
COMPONENT VIDEO INPUT terminals (the signal format)			
Color system	PAL, SECAM, NTSC 3.58/4.43		
Aspect ratio	16 : 9		
Visible size (diagonal)	62CM9UA/62CM9UE/62CM9UR: 1,575 mm 72CM9UA/72CM9UE/72CM9UR: 1,829 mm		
Audio power	15 W + 15 W (10% THD)		
Speakers	120 mm (round) 4pcs.		
Input/Output terminals	⊖ (1) Input 4 pin S-video Phono jacks A/V ⊖ (2) Input 4 pin S-video Phono jacks A/V ⊖ (C1) Input Component video Y, Pb/Cb, Pr/Cr Phono jacks Audio L/Mono + R ⊖ (C2) Input Component video Y, Pb/Cb, Pr/Cr Phono jacks Audio L/Mono + R ⊕ MONITOR Output Phono jacks A/V ⊕ AUDIO OUT Output Phono jacks Audio L + R (Fixed/Variable) ⊕ Woofer Output Phono jack Bass Line out (Variable) ⊖ RGB/PC Input Mini D-sub 15 pin Analog RGB ⊖ AUDIO Input 3.5 mm stereo mini jack ⊖ HDMI 1 Input (type A) 19pin A/V Digital ⊖ HDMI (AUDIO) 1 Input Phono jacks Analog L+R ⊖ HDMI 2 Input (type A) 19pin A/V Digital ⊖ HDMI (AUDIO) 2 Input Phono jacks Analog L+R Headphones jack 3.5 mm (Diameter) stereo		
Supplied accessories	Owner's manual (1), Remote control (1), Batteries (2)		
Optional stand	62CM9UA/62CM9UE/62CM9UR: ST6202S 72CM9UA/72CM9UE/72CM9UR: ST7202S		

• Design and specifications are subject to change without notice.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN